

**1990 EMISSIONS INVENTORY OF
FORTY POTENTIAL SECTION 112(k) POLLUTANTS**

**SUPPORTING DATA FOR EPA'S SECTION 112(k)
REGULATORY STRATEGY**

Final Report

Distributed by:

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May 21, 1999

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1.0 INTRODUCTION

1.1 Background and Purpose

Under Sections 112(k) and 112(c)(3) of the Clean Air Act (CAA) as amended in 1990, the U.S. Environmental Protection Agency (EPA) is required to identify categories and subcategories of sources of hazardous air pollutants (HAPs) in urban areas that pose a threat to human health. Specifically, the EPA must identify area sources of at least 30 HAPs that present the greatest threat to urban populations, and assure that sources that account for 90 percent or more of the aggregate emissions are subject to regulation. In addition, a national strategy must be developed to reduce cancer incidence attributable to these pollutants by at least 75 percent.

In order to meet the requirements of Sections 112(k) and 112(c)(3), national emissions inventories of toxic pollutants are needed. These inventories will serve as the reference baseline in the development of a national strategy to control the pollutant emissions addressed under Section 112(k).

EPA has identified 40 potential Section 112(k) HAPs for which a national inventory was prepared. To develop this list, available toxicity, ambient monitoring, and emissions inventory data were used, as well as results from existing exposure and risk assessment studies. This list was not considered to be final, but rather was a starting point for the focus of further analysis under the EPA's Urban Air Toxics Study. The purpose of this report is to present the national inventory of the 40 potential Section 112(k) HAPs. Three of the HAPs--polycyclic organic matter (POM), dioxins/furans, and mercury compounds--are also included in the EPA inventory report *1990 Emissions Inventory of Section 112(c)(6) Pollutants: Polycyclic Organic Matter (POM), 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD)/ 2,3,7,8-Tetrachlorodibenzofuran (TCDF), Polychlorinated Biphenyl Compounds (PCBs), Hexachlorobenzene, Mercury, and Alkylated Lead.* (U.S. EPA, 1997a).

Table 1-1.
List of Forty Potential Section 112(k) HAPs

1,1,2,2-Tetrachloroethane	Ethyl Acrylate
1,1,2-Trichloroethane	Ethylene Dibromide (1,2-Dibromoethane)
1,2-Dichloropropane (Propylene Dichloride)	Ethylene Dichloride (1,2-Dichloroethane)
1,3-Butadiene	Ethylene Oxide
1,3-Dichloropropene	Formaldehyde
1,4-Dichlorobenzene	Hydrazine
Acetaldehyde	Lead Compounds
Acrolein	Manganese Compounds
Acrylamide	Mercury Compounds
Acrylonitrile	Methyl Chloride (Chloromethane)
Arsenic Compounds	Methylene Chloride (Dichloromethane)
Benzene	Methylene Diphenyl Diisocyanate (MDI)
Beryllium Compounds	Nickel Compounds
bis(2-Ethylhexyl)phthalate	Polycyclic Organic Matter (POM)
Cadmium Compounds	Quinoline
Carbon Tetrachloride	Styrene
Chloroform	Tetrachloroethylene (Perchloroethylene)
Chromium Compounds	Trichloroethylene
Coke Oven Emissions	Vinyl Chloride
Dioxins/Furans	Vinylidene Chloride (1,1-Dichloroethylene)

The definition of POM used in this inventory report is the same as that used in the Section 112(c)(6) inventory report referred to above. However, this definition differs from the POM definition contained in the CAA. The POM definition in Section 112(b) of the CAA, which is currently under review by EPA, is based on chemical and structural principles of the subject compounds. The CAA definition leads to the possibility of thousands of compounds that could qualify as POM. From a practical standpoint, it would not be feasible to inventory all of these potential POM compounds from all sources.

Instead, EPA has opted for a different approach in which specific groups of POM compounds have been listed as surrogates and these groups constitute “POM” for the purposes of this inventory. Two groups have been used, one consisting of 7 polycyclic aromatic hydrocarbons (PAHs) and one consisting of 16 PAHs. In addition, a third approach is also presented in which POM mixtures have been approximated by using the extractable organic matter (EOM) fraction of particulate matter samples. EOM is believed to contain the PAH and substituted-PAH compounds that predict cancer risk better than any individual PAH or any sum of PAH species (Lewtas, 1993). However, the use of the EOM approach is limited because data do not exist for many source categories and thus was not included in this inventory.

The compounds listed in Table 1-2 constitute the 7-PAH (marked with asterisks) and the 16-PAH compounds. The 7-PAH compounds have been determined by the International Agency for Research on Cancer (IARC) to be animal carcinogens. The sum of the emissions of these 7 compounds represents the 7-PAH emission subset that is used in this inventory, and the sum of the emissions of the 16 compounds represents the 16-PAH emission subset used in this inventory.

Table 1-2.**List of 7-PAH and 16-PAH Compounds**

Acenaphthene	Chrysene*
Acenaphthylene	Dibenz(a,h)anthracene*
Anthracene	Fluoranthene
Benz(a)anthracene*	Fluorene
Benzo(a)pyrene*	Indeno(1,2,3-cd)pyrene*
Benzo(b)fluoranthene*	Naphthalene
Benzo(ghi)perylene	Phenanthrene
Benzo(k)fluoranthene*	Pyrene

* 7-PAH compound.

For dioxins/furans, the Section 112(c)(6) report presents emissions as 2,3,7,8-tetrachlorodibenzofuran (2,3,7,8-TCDF), 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD), and 2,3,7,8-TCDD toxic equivalents (TEQs). The 2,3,7,8-TCDD TEQs represent a single aggregate measure of all dioxin and furan congeners, considering the relative toxicities of each. For this reason, only 2,3,7,8-TCDD TEQs are used in this Section 112(k) inventory to represent dioxins/furans. The rationale for these choices of surrogate compounds is presented in the Section 112(c)(6) report (U.S. EPA, 1997a).

It is possible that the use of these surrogate compounds (7-PAH, 16-PAH, and 2,3,7,8-TCDD TEQs) may misrepresent the contribution to emissions or overall risk by an individual source category because of limited test or toxicity data. For POM, the inclusion of multiple approaches will allow EPA to evaluate the relative importance of POM emission sources using each of the approaches, and afford EPA some flexibility in using this report if one of the approaches is deemed preferable during strategy development. For dioxins/furans, it is possible that a different toxicity equivalent factor (TEF) scheme would better represent the risk associated with emissions from a given source category.

The EPA selected 1990 as the base year for the Section 112(k) inventory. A 1990 base year was used because this was the year the most recent CAA amendments were enacted and the Section 112(k) requirements became effective. Hence, to the extent practicable, emissions, activity, and control information are presented for 1990 rather than for the present. Any subsequent emission reductions to meet the requirements of Section 112(k) will thus be credited with respect to 1990 base year levels. In a limited number of cases, 1990 base year emission estimate data were not available (either emissions or source activity or both) and, therefore, a different base year (as close to 1990 as the data would allow) had to be used. These cases can be determined from the inventory documentation.

For several of the source categories addressed in this inventory, Section 112(k) HAP emissions from 1990 to the present have been significantly reduced due to the development and promulgation of various National Emission Standards for Hazardous Air Pollutants (NESHAPs), which contain Maximum Achievable Control Technology (MACT) requirements. Therefore, for some source categories, the 1990 emission inventory estimates shown in this document are not representative of current emissions due to significant reductions made by affected industries.

The national inventory presented in this report includes all known sources of each pollutant, both mobile and stationary (both area and major). All of these sources and emissions may not be subject to the provisions of Section 112(k) (e.g., mobile sources, forest fires, and pesticide application), and may need to be culled out for strategy development purposes.

Preparation of this inventory consisted of first identifying all sources of emissions of the 40 pollutants. Next, national emissions were estimated for all source categories. For stationary sources a distinction between emissions from major and area source categories (as defined in Section 112(a) of the CAA and considering the definition of collocated sources in 57 FR 31576) (*Federal Register*, 1992) was made, and emissions were allocated to urban and rural locations. More information on the methods used to accomplish these tasks is provided below.

1.2 Overview of the Inventory Development Process

The purpose of this discussion is to help explain the data presented in this report and present an overview of the methods used to develop the inventory. Emissions inventory data were primarily obtained from ongoing programs such as EPA's MACT standards programs, EPA Locating and Estimating (L&E) document projects, EPA emission factor development efforts, the Toxic Release Inventory (TRI), the Great Waters program, special studies required under the CAA for utilities and sources of mercury, and the Office of Mobile Sources (OMS). Because there are multiple programs investigating U.S. air toxics emissions, emissions estimates are constantly in flux. For this reason, it is often very difficult to keep all of the estimates consistent. Applicable emissions data and the associated source activity data are continually changing and being improved. The data presented in this report reflect emissions estimates that have been developed given the assumptions and input data documented in this report. They are applicable for a specific time period. They may not necessarily agree with the national estimates from other published estimates due to differences in base years, input emissions and activity data, and calculation assumptions. It should be recognized that some of the data presented here as Section 112(k) estimates will likely change as more information and improved estimation approaches are developed.

The majority of the national stationary source emission estimates developed for the potential Section 112(k) pollutants are based on 1990 data from TRI. Estimates for the rest of the stationary sources as well as the mobile sources are based on a “top-down” approach. This means they were developed using national-level activity data and some measure of emissions that could be applied to these data. The Section 112(k) national estimates were determined using existing data; no source testing or industry surveys to gauge activity levels were conducted for the specific purposes of Section 112(k). Surveys conducted in support of MACT rule development were obtained when possible and used in the estimates presented in this report. The bulk of the estimates were developed by applying an emission factor or series of factors (associated with varying source configurations, material/fuel types, and controls) to a set of

activity data (e.g., production rate, fuel input rate, waste disposal rate, and vehicle miles traveled rate) that correlate with the surrogate being used to approximate emissions.

Emissions for each source category were then allocated to major/area (stationary sources only) and urban/rural proportions using available information. For the major/area source allocations, information gathered through the MACT rule development process was given priority. Other allocations were made based on discussions with industry experts and using engineering judgement. The urban/rural proportions were also developed in several ways. Highest priority was given to facility-specific data that indicated the county and state of each facility in a source category. Other examples of allocation methods used are employment within a Standard Industrial Classification (SIC) Code group, population, and fuel consumption by state or region. For mobile sources, the urban/rural allocations were based on such factors as: vehicle miles traveled, fuel usage, number of airports, and population. However, for the commercial marine vessels these were all assigned to urban areas.

1.3 Report Organization

Section 2.0 of this report summarizes the emission estimates for each potential Section 112(k) HAP. For each HAP, estimates of total national emissions are presented, as well as both urban and rural emission estimates each broken out by major, area, and mobile source categories. Section 3.0 describes the general methodologies, approaches, and data sources used to compile the potential Section 112(k) pollutant national estimates, including the methods used to identify source categories, estimate emissions, and allocate emissions to major/area and urban/rural proportions. Data limitations are identified and discussed in Section 4.0. Section 5.0 provides information on the quality assurance/quality control (QA/QC) procedures implemented in the development of this inventory. Section 6.0 presents a summary of the emission estimates for each potential Section 112(k) HAP by source category. For each source category, estimates of total national emissions are presented as well as separate urban and rural emission estimates. References used in this report appear in Section 7.0. Section 8.0 contains an index to the appendices, organized alphabetically by source category name.

The appendices provide more details on the bases for the emission estimates.

Appendix A provides documentation by source category for the pollutant estimates that were based partially or entirely on non-TRI data. [NOTE: Appendix A is very large. If accessing this file electronically, it is recommended that only the information for the specific source category or pollutant of interest be printed.] Appendix B provides the lists of facilities for source categories where the emissions data were taken from TRI for these facilities. Appendix C presents the source categories for which TRI data were extracted using SIC Codes. Appendix D includes source categories for which specific facilities were removed from the TRI data used in this inventory to avoid double counting (i.e., estimates for these facilities came from sources other than TRI). Appendix E presents information on the major/area and urban/rural allocation schemes used for each source category.

2.0 SUMMARY OF EMISSION ESTIMATES

Table 2-1 summarizes the 1990 base year emission estimates developed for each potential Section 112(k) HAP. To support the requirements of Section 112(k) of the CAA, estimated national emissions for each HAP are presented, and the estimates are presented by their urban/rural and major/area/mobile source proportions.¹

More detailed documentation on how the emission estimates were prepared is provided in Appendices A through E. The documentation provided identifies the key input data that were used in the calculation of national emissions. The documentation is not meant to provide an exhaustive analysis on the derivation of all the inputs. For example, an emission factor used for a national estimate may be given in the appendix, but the 10 source tests that were evaluated to obtain this factor are not presented and discussed. The goal of the documentation provided is to show in a brief and concise manner where a given number came from. For example, some estimates are based on data obtained directly from work done by EPA for the development of MACT standards. These estimates may have been the product of several years of work, and may be based upon many complex analyses and data sets. In this case, the documentation provided here will identify the overall methodology and values used to calculate emissions (activity levels, emission factors, etc.) if available, but it will not provide all of the data that EPA used to develop these final numbers. References are provided to allow further investigation of any estimate if desired.

¹A major source is any stationary source of air pollution that has the potential to emit, considering controls, 10 tons or more per year of any HAP or 25 tons or more per year of any combination of HAPs. An area source is any stationary source of HAPs that does not qualify as a major source. Bureau of the Census statistical data were used to spatially allocate emissions on an urban and rural basis. Urban-1 counties contain metropolitan statistical areas with a population greater than 250,000. Urban-2 counties do not contain metropolitan statistical areas with a population greater than 250,000, but the Bureau of the Census has designated more than half of the county as urban. For rural counties, the Bureau of the Census has designated more than half of the county as rural.

Table 2-1. Base Year 1990 National Emission Estimates for Potential Section 112(k) Pollutants

112(k) Pollutant	Total Emissions (Urban and Rural)	Rural Emissions				Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
		Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
		Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	
1,1,2,2-Tetrachloroethane	2.57E+02	5.86E+00	3.25E+01	0.00E+00	3.84E+01	2.92E+01	1.45E+02	0.00E+00	1.74E+02	1.56E+01	2.90E+01	0.00E+00	4.46E+01	2.18E+02
1,1,2-Trichloroethane	7.44E+02	2.50E+02	1.19E-01	0.00E+00	2.50E+02	1.74E+02	3.90E+00	0.00E+00	1.78E+02	3.15E+02	1.15E+00	0.00E+00	3.16E+02	4.93E+02
1,2-Dichloropropane	6.58E+02	1.09E+02	3.76E+00	0.00E+00	1.13E+02	5.07E+02	1.60E+01	0.00E+00	5.24E+02	1.57E+01	3.26E+00	0.00E+00	1.89E+01	5.42E+02
1,3-Butadiene	7.19E+04	3.64E+02	1.43E+04	1.41E+04	2.87E+04	3.06E+03	2.10E+03	2.60E+04	3.11E+04	6.01E+02	3.64E+03	7.78E+03	1.20E+04	4.31E+04
1,3-Dichloropropene	1.99E+04	8.44E-01	3.28E+03	0.00E+00	3.28E+03	3.23E+01	1.38E+04	0.00E+00	1.38E+04	6.35E-01	2.82E+03	0.00E+00	2.82E+03	1.67E+04
1,4-Dichlorobenzene	5.15E+03	1.69E+02	7.25E+02	0.00E+00	8.94E+02	5.28E+02	3.06E+03	0.00E+00	3.59E+03	3.81E+01	6.22E+02	0.00E+00	6.60E+02	4.25E+03
Acetaldehyde	1.38E+05	7.58E+03	3.57E+04	1.53E+04	5.87E+04	7.13E+03	5.68E+03	4.02E+04	5.30E+04	6.69E+03	9.11E+03	9.99E+03	2.58E+04	7.88E+04
Acrolein	6.27E+04	1.52E+02	3.04E+04	2.84E+03	3.33E+04	1.56E+02	1.06E+04	7.63E+03	1.84E+04	4.37E+02	8.60E+03	1.85E+03	1.09E+04	2.93E+04
Acrylamide	3.53E+01	1.49E+00	2.73E-01	0.00E+00	1.77E+00	2.87E+01	2.17E+00	0.00E+00	3.08E+01	1.64E+00	8.70E-01	0.00E+00	2.51E+00	3.34E+01
Acrylonitrile	2.55E+03	2.38E+02	6.37E+01	0.00E+00	3.02E+02	8.12E+02	2.98E+02	0.00E+00	1.11E+03	1.05E+03	7.84E+01	0.00E+00	1.13E+03	2.24E+03
Arsenic Compounds	2.84E+02	5.37E+01	3.20E+01	5.90E-01	8.64E+01	9.24E+01	1.74E+01	1.91E+00	1.12E+02	7.09E+01	1.51E+01	2.98E-01	8.63E+01	1.98E+02
Benzene	3.91E+05	7.59E+03	4.49E+04	8.18E+04	1.34E+05	1.85E+04	1.36E+04	1.54E+05	1.86E+05	9.84E+03	1.51E+04	4.56E+04	7.06E+04	2.56E+05
Beryllium Compounds	1.22E+01	3.51E+00	3.56E-01	0.00E+00	3.87E+00	3.72E+00	1.78E+00	2.00E-02	5.52E+00	2.25E+00	5.11E-01	0.00E+00	2.76E+00	8.29E+00
bis(2-Ethylhexyl)phthalate	8.06E+02	2.19E+02	1.29E+01	0.00E+00	2.32E+02	4.65E+02	4.81E+01	0.00E+00	5.14E+02	5.36E+01	6.89E+00	0.00E+00	6.05E+01	5.74E+02
Cadmium Compounds	2.03E+02	3.11E+01	6.34E+00	0.00E+00	3.75E+01	1.08E+02	2.55E+01	3.10E-01	1.34E+02	2.54E+01	6.22E+00	0.00E+00	3.16E+01	1.66E+02
Carbon Tetrachloride	5.52E+03	2.16E+03	2.51E+01	0.00E+00	2.18E+03	1.61E+03	6.87E+01	0.00E+00	1.68E+03	1.62E+03	2.09E+01	0.00E+00	1.65E+03	3.33E+03
Chloroform	2.27E+04	9.40E+03	9.88E+01	0.00E+00	9.50E+03	5.31E+03	4.23E+02	0.00E+00	5.73E+03	7.41E+03	8.05E+01	0.00E+00	7.49E+03	1.32E+04
Chromium Compounds	9.28E+02	1.05E+02	5.16E+01	1.36E+01	1.70E+02	3.02E+02	2.87E+02	3.20E+01	6.20E+02	8.06E+01	4.79E+01	8.33E+00	1.37E+02	7.57E+02
Coke Oven Emissions	1.76E+03	1.89E+02	0.00E+00	0.00E+00	1.89E+02	1.32E+03	0.00E+00	0.00E+00	1.32E+03	2.52E+02	0.00E+00	0.00E+00	2.52E+02	1.57E+03
Dioxins/Furans as 2,3,7,8-TCDD TEQ	3.18E-03	4.18E-04	2.78E-04	3.19E-05	7.28E-04	1.41E-03	3.98E-04	4.70E-05	1.85E-03	4.07E-04	1.79E-04	1.61E-05	6.02E-04	2.46E-03
Ethyl Acrylate	1.60E+02	6.91E+00	1.53E+00	0.00E+00	8.44E+00	1.17E+02	1.78E+01	0.00E+00	1.35E+02	1.43E+01	9.70E-01	0.00E+00	1.52E+01	1.50E+02
Ethylene Dibromide	5.06E+01	1.98E+01	3.03E-02	0.00E+00	1.99E+01	2.11E+01	4.28E-01	0.00E+00	2.16E+01	8.87E+00	3.94E-02	0.00E+00	8.91E+00	3.05E+01
Ethylene Dichloride	4.18E+03	1.39E+03	1.87E+01	0.00E+00	1.41E+03	1.87E+03	6.24E+01	0.00E+00	1.93E+03	8.10E+02	1.90E+01	0.00E+00	8.29E+02	2.76E+03
Ethylene Oxide	2.57E+03	2.10E+02	2.06E+02	0.00E+00	4.15E+02	9.16E+02	9.88E+02	0.00E+00	1.90E+03	9.41E+01	1.53E+02	0.00E+00	2.47E+02	2.15E+03
Formaldehyde	3.51E+05	7.60E+03	9.36E+04	4.49E+04	1.46E+05	1.74E+04	2.30E+04	1.05E+05	1.45E+05	6.53E+03	2.54E+04	2.76E+04	5.95E+04	2.05E+05
Hydrazine	1.97E+01	7.04E+00	1.34E-01	0.00E+00	7.17E+00	9.59E+00	9.82E-01	0.00E+00	1.06E+01	1.83E+00	6.26E-03	0.00E+00	1.83E+00	1.24E+01
Lead Compounds	3.27E+03	2.67E+02	8.01E+01	1.86E+02	5.34E+02	9.49E+02	3.43E+02	8.54E+02	2.15E+03	3.18E+02	1.14E+02	1.59E+02	5.91E+02	2.74E+03
Manganese Compounds	2.85E+03	7.61E+02	1.41E+02	1.19E+01	9.13E+02	1.02E+03	3.99E+02	3.26E+01	1.46E+03	3.63E+02	1.06E+02	7.67E+00	4.76E+02	1.93E+03
Mercury Compounds	2.08E+02	3.41E+01	1.85E+01	2.80E+00	5.54E+01	6.30E+01	3.26E+01	7.31E+00	1.03E+02	2.76E+01	1.99E+01	1.82E+00	4.93E+01	1.52E+02
Methyl Chloride	6.44E+03	1.01E+03	2.22E+01	0.00E+00	1.03E+03	4.54E+03	4.45E+01	0.00E+00	4.58E+03	7.69E+02	2.26E+01	0.00E+00	7.92E+02	5.37E+03
Methylene Chloride	1.04E+05	1.02E+04	3.02E+03	0.00E+00	1.32E+04	6.42E+04	1.32E+04	0.00E+00	7.74E+04	1.05E+04	2.92E+03	0.00E+00	1.34E+04	9.08E+04
Methylene Diphenyl Diisocyanate	2.39E+02	1.01E+02	2.68E+01	0.00E+00	1.27E+02	3.86E+01	3.79E+01	0.00E+00	7.64E+01	1.85E+01	1.71E+01	0.00E+00	3.56E+01	1.12E+02
Nickel Compounds	1.25E+03	7.72E+01	4.33E+01	7.38E+00	1.28E+02	5.04E+02	3.12E+02	8.31E+01	8.99E+02	1.57E+02	5.72E+01	4.48E+00	2.19E+02	1.12E+03
Polycyclic Organic Matter as 7-PAH	1.32E+03	8.97E+01	7.02E+02	1.38E+01	8.06E+02	9.80E+01	1.34E+02	2.66E+01	2.58E+02	6.32E+01	1.83E+02	7.78E+00	2.54E+02	5.13E+02
Polycyclic Organic Matter as 16-PAH	1.73E+04	1.33E+03	3.09E+03	3.02E+01	4.45E+03	4.56E+03	5.20E+03	6.18E+01	9.83E+03	1.45E+03	1.53E+03	1.73E+01	2.99E+03	1.28E+04
Quinoline	2.60E+01	2.52E+00	1.01E-01	0.00E+00	2.62E+00	1.85E+01	1.20E+00	0.00E+00	1.97E+01	3.22E+00	2.65E-01	0.00E+00	3.49E+00	2.32E+01

Table 2-1. Base Year 1990 National Emission Estimates for Potential Section 112(k) Pollutants

112(k) Pollutant	Total Emissions (Urban and Rural)	Rural Emissions				Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
		Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
		Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	
Styrene	5.45E+04	7.71E+03	8.56E+02	6.34E+03	1.49E+04	1.66E+04	1.62E+03	1.05E+04	2.87E+04	6.78E+03	7.71E+02	3.34E+03	1.09E+04	3.95E+04
Tetrachloroethylene	1.26E+05	2.36E+03	2.04E+04	0.00E+00	2.27E+04	1.65E+04	6.58E+04	0.00E+00	8.23E+04	2.80E+03	1.84E+04	0.00E+00	2.12E+04	1.03E+05
Trichloroethylene	7.51E+04	7.01E+03	1.63E+03	0.00E+00	8.65E+03	4.50E+04	1.10E+04	0.00E+00	5.60E+04	8.65E+03	1.87E+03	0.00E+00	1.05E+04	6.65E+04
Vinyl Chloride	2.70E+03	2.22E+02	8.51E+01	0.00E+00	3.07E+02	1.51E+03	4.03E+02	0.00E+00	1.91E+03	4.00E+02	8.08E+01	0.00E+00	4.81E+02	2.39E+03
Vinylidene Chloride	2.23E+02	6.54E+00	8.43E+00	0.00E+00	1.50E+01	6.87E+01	3.35E+01	0.00E+00	1.02E+02	9.88E+01	6.53E+00	0.00E+00	1.05E+02	2.08E+02
	1.48E+06	6.90E+04	2.53E+05	1.66E+05	4.88E+05	2.16E+05	1.73E+05	3.44E+05	7.33E+05	6.83E+04	9.19E+04	9.63E+04	2.57E+05	9.89E+05

3.0 INVENTORY DEVELOPMENT METHODOLOGY

3.1 Source Category Identification

This project initially focused on compiling existing national emission estimates for the potential Section 112(k) HAPs. It was equally important, however, to identify all of the known and suspected emission sources of each potential Section 112(k) pollutant. Well known and readily available information sources that might provide national emission estimates were examined, and an extensive literature search was conducted to identify emission factors or process information sufficient to identify potential sources of Section 112(k) emissions. In addition, other literature sources that have no emission estimates or emission factors were reviewed in order to identify suspect source categories for the potential Section 112(k) pollutants that might not have been identified in other references. The following references were reviewed to identify sources of the potential Section 112(k) HAPs:

- Numerous documents in the EPA's Locating and Estimating series;
- *Compilation of Air Pollutant Emission Factors* (AP-42) (U.S. EPA, 1997b);
- The Toxic Release Inventory (TRI) database (U.S. EPA, 1997c);
- The Factor Information Retrieval (FIRE) database (U.S. EPA, 1995a);
- MACT Background Information Documents (BIDs) and other data gathered in support of MACT rule development;
- *National Air Pollutant Emission Trends, 1900-1996* (U.S. EPA, 1997d);
- *Chemical Origins and Markets* (SRI, 1993);
- *Estimation of Nickel Species in Ambient Air* (Brooks et al., 1985);
- *Cumulative Air Toxics Exposures Ambient Concentration Modeling* (Systems Applications International, 1995);
- Previously developed Section 112 reports; and

- Guidance from the OMS for the mobile source categories.

The references were reviewed to identify as many source categories as possible. If the literature suggested that a source category emits a potential Section 112(k) HAP, but no emissions data (e.g., emission factor, activity data) were readily available, the category was still flagged as a suspect source. A matrix was developed from this identification process that linked source categories to emissions data references. This matrix served as the starting point to develop the inventory and the foundation for the data management scheme.

3.2 General Description of Emission Estimation Methodologies

3.2.1 *Stationary Sources*

As noted previously, most of the emission estimates presented in this report are facility-specific estimates from the TRI database. Others are “top-down” estimates. This means they were developed using national-level activity data and some measure of emissions that could be applied to these data. Few categories had estimates developed from a true “bottom-up” basis (i.e., estimates developed specifically for individual sources and summed to obtain a national total). In cases where individual facility data were available to inventory a category (e.g., municipal waste combustors), sometimes not all sites or HAPs could be addressed with site-specific data; in these cases default factors and/or activities had to be developed. In such instances the bottom-up estimates are not completely site-specific, but rather were modeled based on a sample of facilities.

Data on the potential Section 112(k) pollutants from TRI were used in a number of ways. For some source categories, a facility list was used to extract emissions data reported to TRI by these facilities. For other source categories that are subject to NESHAPs and are defined in part or entirely by one or more SIC Codes, the applicable SIC Code(s) was used to extract TRI data. Where a facility appeared both on a facility list and one of these SIC Code lists, the facility was assigned to only one source category to prevent double counting. For some categories, EPA

elected to use more accurate emission estimates such as those derived from Section 114 surveys or trade organization data. These values replaced the ones reported to TRI.

Any facilities that report to TRI but which were not specifically allocated to a source category using either a facility list or one of the SIC Code lists that are subject to regulation were grouped according to their primary SIC Code. The reported emissions for the potential Section 112(k) pollutants were included in a Section 112(k) source category described by the SIC Code name.

The top-down estimates were developed by combining emission factors with activity data that correlates with the surrogate being used to approximate emissions. As stated in Section 1.0, the intent was to obtain activity data that represented 1990 base levels as closely as possible. The emission factors were evaluated for age, completeness, representativeness, and overall quality. Acceptable data were used to develop composite emission factors for use in the national estimates. In some cases, the emission factors came from the most current version of EPA's AP-42 document (U.S. EPA, 1997b). If emission factors for the potential Section 112(k) HAPs were not available in AP-42, other sources were sought. Source testing was not performed specifically and directly for EPA's Section 112(k) program, but some estimates were based on recent test data; often these estimates came from standards development programs where EPA, states, and/or industry had conducted recent testing.

Most of the source activity data were obtained from published sources such as government statistical documents and databases (e.g., Energy Information Administration fuel consumption reports, Forest Service reports on fires and burned acreage, and waste disposal reports published by EPA), industry trade publications, and commercially published business directories and journals. For many of the MACT standard-derived estimates, activity data were obtained directly from the affected industry through the EPA's Emission Standards Division.

In addition to the emission factor and activity method, another general approach used involved speciating known emissions, production levels, or waste streams for the subject

category based on data that indicated the level of the potential Section 112(k) HAP. For example, national particulate matter (PM) emissions from a category may have been known from other studies, and if available data indicated that a known percentage of the PM emissions from this category are POM, a national estimate for POM could be determined. In a similar manner, in some cases the emissions of a related form of a potential Section 112(k) pollutant were known from other studies, and the speciation of the larger pollutant group was known for the potential Section 112(k) HAP. Emissions for the potential Section 112(k) HAP could then be determined based on the speciation ratio. An example of this would be the estimation of 2,3,7,8-TCDD emissions based on its contribution to total chlorinated dioxin emissions from a category when the total dioxin emissions were known. In other cases, the speciation of a product (e.g., pesticide) may have been known and, due to the nature of the product and its associated usage, an estimate could be made that all or some fraction of the material (and the HAP constituent) was lost to the atmosphere. The same approach was used for some cases where the pollutant was a constituent of a waste stream from a subject category, and the total amount of waste and the HAP composition of the waste stream were known. The emission estimation hierarchy is discussed in Section 3.3.

3.2.2 *Mobile Sources*

The emission estimates for each of the mobile source categories (aircraft, onroad vehicles, nonroad vehicles and equipment, commercial marine vessels [CMVs], and locomotives) were calculated using “top-down” approaches.

EPA emission inventory guidance for the calculation of aircraft emissions is based on the landing and takeoff (LTO) cycle of different aircraft models which consists of five specific operating modes. Volatile organic compound (VOC) and particulate matter (PM) emissions for one complete LTO cycle for a given aircraft model can be calculated using the emission factors for each operating mode of the engine types used and the period of time the aircraft is typically in each mode. Emission factors and default time-in-mode values were obtained from the Federal Aviation Administration (U.S. DOT, 1998). National VOC and PM emissions were estimated by

applying the LTO emission estimate to the national number of LTOs associated with each aircraft model. Aircraft-specific national LTO data for 1990 were obtained from the *FAA Airport Activity Statistics of Certified Air Carriers* (U.S. DOT, 1990a). Default VOC emission factors from EPA's *Procedures for Emission Inventory Preparation, Volume IV: Mobile Sources* (U.S. EPA, 1992a) were applied to 1993 national LTO data (U.S. DOT, 1993) for general aviation and air taxis to estimate VOC emissions. National aircraft VOC and PM emission estimates were speciated to obtain national estimates for individual HAPs using the speciation profiles provided by the U.S. EPA OMS (Cook, 1997, Cook, 1998a).

Two different approaches were used to develop onroad vehicle emission estimates. The most commonly used approach to estimate emissions from onroad vehicles was the speciation approach in which national VOC and PM estimates for each vehicle type obtained from the Trends report (U.S. EPA, 1997d) were disaggregated into exhaust and evaporative estimates based on data used to develop the Trends report. Appropriate speciation profiles from recent test studies published in peer-reviewed journals and profiles compiled in the U.S. EPA's SPECIATE database (U.S. EPA, 1995b) were applied to these VOC and PM estimates.

In the second approach onroad vehicle emissions were also calculated based on vehicle miles traveled (VMT)-based emission factors from recently published test studies from peer reviewed journals and VMT estimates provided by the U.S. DOT (U.S. DOT, 1990b).

Nonroad lead emission estimates were obtained from the U.S. EPA's Trends report (U.S. EPA, 1997d). All other nonroad emission estimates were calculated using a speciation approach that utilized national total organic gas (TOG) (Cook, 1998b), VOC (Cook, 1998c), or PM (Cook, 1998c) estimates. Draft nonroad VOC data for the 1998 Trends inventory (9/29/98 version, Cook, 1998c) were used for the nonroad gasoline and diesel engine VOC totals. The national TOG and VOC emission estimates for gasoline-powered vehicles and equipment were disaggregated into 2- and 4-stroke engine types and further disaggregated into exhaust and evaporative emissions based on data from the NONROAD model (Cook, 1998b). Appropriate speciation profiles from recent test studies published in peer-reviewed journals and profiles

compiled in the U.S. EPA's SPECIATE database (U.S. EPA, 1995b) were applied to the TOG, VOC, and PM estimates.

Estimates for the commercial marine vehicle source category were developed using national-level CMV distillate and residual fuel oil sales obtained from the *Fuel Oil and Kerosene Sales, 1990* report (U.S. DOE, 1991). Assumptions of the percentage of fuel oil burned in port were obtained from *Procedures for Emission Inventory Preparation, Volume IV: Mobile Sources* (U.S. EPA, 1989). Distillate fuel oil sales were converted from gallons to VOCs using conversion factors taken from *Procedures for Emission Inventory Preparation, Volume IV: Mobile Sources* (U.S. EPA, 1989). The heavy-duty diesel vehicle (HDDV) speciation profiles derived from information provided in *Evaluation of Factors That Affect Diesel Exhaust Toxicity* (Truex and Norbeck, 1998) were applied to the distillate fuel oil in port usage VOC estimates. It was assumed that emissions from marine vessels using distillate fuel oil were created by large diesel engines similar to those found in HDDVs. Emission factors obtained from the U.S. EPA (Porter, 1998, U.S. EPA, 1996) were applied to the residual fuel oil in port usage.

For the locomotive source category, estimates were developed using national-level locomotive distillate fuel oil sales obtained from the *Fuel Oil and Kerosene Sales, 1990* report (U.S. DOE, 1991). The fuel oil sales were used with VOC emission factors for diesel engines to estimate VOC emissions (U.S. EPA, 1992a). To estimate HAP emissions, appropriate speciation profiles (Truex and Norbeck, 1998) were applied to the locomotive VOC emissions. The U.S. EPA assumed that the speciation profiles for HDDV could also be used for locomotives (U.S. EPA, 1992a).

3.3 Emission Estimation Methodology Hierarchy

An emissions estimation methodology hierarchy was established in order to prepare the Section 112(k) inventory from a variety of data sources. The hierarchy was developed to obtain the best emission estimates within the time frame and limitations of the inventory effort. Since no specific source testing or industry surveying were done in direct support of this inventory

effort, emissions were estimated using information from existing data resources using the methodologies described in Section 3.2. In some cases, multiple methodologies were available to develop emission estimates for a source category; it is for these cases that the hierarchy of methods was used to select the most appropriate methodology to meet the objectives of the inventory. The estimation hierarchy is discussed in Sections 3.3.1 to 3.3.3.

3.3.1 Existing Emission Estimates

It was established early in the inventory planning process that the preferred approach would be to use national emissions directly from existing inventories prepared in previous EPA studies. The following references were identified for this purpose for the indicated Section 112(k) pollutants:

Section 112(c)(6) Report:	Dioxins/Furans, 7-PAH, 16-PAH (POM) Mercury Compounds
Previously Developed Section 112(k) Reports:	1,3-Butadiene Benzene Carbon Tetrachloride Formaldehyde Methylene Chloride Tetrachloroethylene Trichloroethylene
Locating and Estimating Documents	Cadmium Compounds Chromium Compounds Dioxins/Furans Ethylene Dichloride Lead Compounds

National Air Pollutant Emission Trends, 1900-1996	Styrene Vinylidene Chloride Lead Compounds
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Each of the above references contained national emission estimates for a selection of source categories based on the scope of the particular inventory. Since the references had not been through the identical level of external review and comment response at the time this inventory was being prepared, priority was assigned to those reports that were closer to being designated “final.” For example, the national emission estimates for lead compounds that are documented in the EPA’s Trends report (U.S. EPA, 1997d) are considered final and were used directly for many reported source categories in that document. All of the estimates for 7-PAH, 16-PAH, dioxins/furans, and mercury compounds that are documented in the Section 112(c)(6) report (U.S. EPA, 1997a) had been through external peer review, with the majority of them being considered final, and were used directly for this inventory.

National emission estimates were also available for seven solvents (1,3-butadiene, benzene, carbon tetrachloride, formaldehyde, methylene chloride, tetrachloroethylene, and trichloroethylene) from a previously prepared Section 112(k) report (U.S. EPA, 1996). Emission estimates for these solvents were considered final; however, for certain source categories where improved data or methodologies were now available, emissions were recalculated. For pollutants with national estimates available from other reference sources (e.g., MACT BIDs and L&E documents), the emission estimates were evaluated for their accuracy, completeness, and reliability. Existing emission estimates that appeared to be reasonable, complete, and well documented were used directly in the inventory. One example is facility-specific emissions data for the Secondary Lead Smelting Industry that was provided by the EPA lead for the Secondary Lead Smelting NESHAP.

The estimates obtained or based on data from regulatory development programs (see Appendix A) were generally accepted as the best available data for the inventory, even though

data collection and analyses may not have been final. These estimates have the benefit of being based on recent test data, control information, representative modeling scenarios, and input from informed industry and EPA experts. In some instances, these estimates represented a summation of actual source test data for most or all sources in the category. In other cases, the MACT studies may have focused only on specific processes. These estimates are of significantly higher quality than those derived through the use of an overall emission factor.

Another source used directly for emissions was the L&E documents. For example, the cadmium L&E report (U.S. EPA, 1993a) contained base year 1990 national estimates, was a published, final report, contained documented emission calculations, and generally was considered to be prepared under guidelines similar to those used for the current Section 112(k) inventory. The arsenic, dioxins/furans, and lead L&E documents were under revision at the time this inventory was prepared. Every effort was made to use newly available emission factors and emission estimates presented in these documents for the Section 112(k) inventory.

Despite the unknown quality of the TRI data, TRI was another important source of facility-specific data. TRI only contains facility-specific emissions data for sources that meet certain reporting criteria, thus does not account for smaller sources that may fall within an industry group. Other limitation are discussed in Section 4.1.

3.3.2 Emission Factor and Activity Level

When national emissions estimates were not directly available from a preferred reference source and emission factors and activity level data for a source category were identified, emissions were calculated. For example, if the only reference source of existing national emission estimates for a source category was TRI and representative emission factors and associated activity-level data were available for that source category, emissions were often calculated using the emission factors and activity data rather than using the TRI data. The biggest influence on the quality of the estimates calculated this way (and the basis for selecting the factor/activity level approach over another) is the validity of the emission factor(s) used in

terms of absolute accuracy as well as representativeness for the processes to which it was applied. The activity data can also affect the quality of an emissions estimate; however, many standardized and credible references for activity data precluded any large margin of error being associated with the activity level. For example, 1990 base year activity data were already available from the Section 112(c)(6) or previous Section 112(k) work for many source categories.

For some source categories, emission factors were obtained from EPA's *Compilation of Air Pollutant Emission Factors* (AP-42) document (U.S. EPA, 1997b). Because the emission factors in AP-42 have a quality rating associated with them as well as accompanying documentation to describe the processes or units on which they are based, this reference source was given a high priority when using the factor/activity level approach. If the emission factors had high ratings (e.g., "A" or "B") and the associated activity level data were available, national emissions were calculated with the AP-42 data. Many of the emission factors (particularly for combustion sources) used to develop emission estimates were found in AP-42.

Another emission factor reference source was the EPA's FIRE system database. This database contains selected, rated emission factors originating from AP-42, L&E documents, literature references, and state source test reports (particularly those from the California Air Resources Board [CARB]). These emission factors are rated similarly to AP-42 emission factors, however, most emission factors in FIRE (besides the ones that are cross-referenced to AP-42) do not have extensive supporting documentation for their derivation. Because the entries contain a source classification code (SCC) identifier and short process descriptions, FIRE was considered a relatively high-priority reference for quality-rated emission factor data where a good match with process type and activity data could be made.

Emission factors from other special reports and studies were used in inventory preparation. For example, on-road mobile emission estimates were determined using emission factors from the EPA's OMS 1993 report, *Motor Vehicle-Related Air Toxics Study* (MVRATS) (U.S. EPA, 1993b), and national vehicle miles traveled (VMT) activity data generated by the Federal Highway Administration (FHWA). Since OMS is the recognized authority on mobile

source emissions and has the most extensive database of toxics-related mobile source emission factor data, this specialized approach was selected for the inventory.

The availability and overall quality of the activity data (i.e., throughput, production, fuel use) varied by source category. Most of the activity data were obtained from published business/manufacturing sources, governmental statistics publications, and background information from EPA regulatory programs. Other sources of activity data were the Department of Transportation and the Department of Energy's Energy Information Administration.

3.3.3 Speciation Profiles

Suitable speciation profiles were not available for most source categories in the inventory and were generally not used. Significant limitations were identified for the use of the speciation profiles, particularly the poor representation of source categories and the age of the data on which most profiles are based. There were some exceptions, however; nonroad mobile source emissions were determined using activity data from OMS's *Non-road Engine and Vehicle Emission Study* (NEVES) (U.S. EPA, 1991) and speciated volatile organic compound (VOC) emissions data developed by OMS. Aircraft emissions were determined by using the approach recommended in the *Procedures for Emission Inventory Preparation, Volume IV: Mobile Sources* to estimate total hydrocarbon emissions (U.S. EPA, 1992a). The hydrocarbon emission totals were then speciated using HAP profiles to quantify the toxic components of aircraft emissions.

3.4 Procedures Used to Allocate Emissions

3.4.1 Method for Urban/Rural Allocations

Sections 112(k) and 112(c)(6) of the CAA are particularly concerned with HAPs that “present the greatest threat to public health in the largest number of urban areas.” However, the CAA does not provide a definition of “urban.” Urban areas with populations greater than

250,000 are singled out for air monitoring; however, the possibility of monitoring other urban areas is also mentioned.

To spatially allocate emissions on an urban and rural basis, Bureau of the Census statistical data were used (U.S. Bureau of the Census, 1990). The Bureau of the Census has designated urban populations within every county in the United States. The criteria used by the Bureau of the Census include population density and total population. In this inventory, using population data and the Bureau of the Census urban designations for 1990, every county in the United States was classified as one of the following categories:

- Urban-1 (U1) counties that include a metropolitan statistical area (MSA) with a population greater than 250,000.
- Urban-2 (U2) counties that do not include an MSA with a population greater than 250,000, but the Bureau of the Census designates more than 50 percent of the county population as “urban.”
- Rural (R) counties that do not include an MSA with a population greater than 250,000 and the Bureau of the Census designates more than 50 percent of the county population as “rural.”

If any part of a county contained an Urban-1 area, then the whole county was classified as Urban-1. For all remaining counties, if greater than 50 percent of the population was classified as rural, then that county was classified Rural. Counties not designated as Urban-1 or Rural were classified as Urban-2.

Emissions were assigned to counties by various methods. In some cases, such as with TRI estimates and data obtained from MACT studies, emissions could be assigned to individual facilities and then summed at the county level.

In cases where facility-specific data were not available or could not be provided in a format amendable by SAS® (Statistical Analysis System, the software used to perform the spatial allocations) within the time constraints of this project, emissions were assigned to individual

counties using surrogate approaches. Some examples of these surrogate approaches include proportioning national nonroad vehicle emissions to counties based on population, proportioning emissions from some industrial sectors to counties based on 1990 SIC Code employment estimates, and assigning emissions from forest fires to counties based on forested acres. For a complete list of spatial allocation approaches used in this study, see Appendix E. The spatial allocation methods used for specific source categories are documented in this appendix.

3.4.2 *Method for Major/Area Source Allocations*

The national emission estimates for stationary source categories were also allocated according to whether the emitting facilities were classified as “major,” “area,” or could be classified partially as both. As the name implies, major sources are generally larger with greater per-source levels of emissions, while area sources have fewer emissions on a per-source basis and may be more dispersed. According to Title I, Section 112(a) of the CAA, a “major source” is any stationary source (including all emission points and units located within a contiguous area and under common control) of air pollution that has the potential to emit, considering controls, 10 tons or more per year of any HAP or 25 tons or more per year of any combination of HAPs. An “area source” is any stationary source of HAPs that does not qualify as a major source. The reader can refer to the July 16, 1992, *Federal Register* notice for a more detailed discussion of the concept of collocation (*Federal Register*, 1992). The allocation of emissions for each source category to a major/area source basis will be helpful in evaluating the effect of existing and future regulatory programs (e.g., MACT standards) on emissions reductions. For example, most existing MACT standards are geared more toward major sources as opposed to area sources. If it turns out that area sources constitute a large portion of Section 112(k) pollutant emissions, future standards programs may need to consider incorporating more area sources in their applicability determinations.

The major/area allocations that were determined for the purpose of this inventory are presented along with the spatial allocation schemes in Appendix E for all the source categories. The major/area proportions were applied to the total national emissions of each pollutant from

each source category to calculate the major and area source emissions for the category. These values take into consideration collocation of processes where data are available. The major/area allocation proportions were derived in a variety of ways. The reader should not treat these proportions and the resulting calculated major/area source emissions as absolutes. The primary goal was to determine whether emissions for a category were predominantly a major or area source. The rationale used to make the major/area source determinations varied depending on available information. The EPA report *Documentation for Developing the Initial Source Category List*, which was used to identify major source categories for standards development purposes, was a key reference (U.S. EPA, 1992b). In some cases, the accepted way that a source category is typically inventoried served as a guide for the classification (e.g., residential wood burning is always assessed as an area source). In other cases, technical analyses were conducted using actual and model plant data to determine typical facility sizes and emissions to see what percentage of facilities in a category would likely cross the 10 or 25 ton-per-year HAP threshold. One example is the facility-specific data from TRI that was used to determine the facility's major source status. Lastly, in cases where no applicable data could be found on which to base an allocation, engineering judgement was used to assign an allocation.

It is important to note that the percentages shown in Appendix E have no bearing or relevance to major source determinations that states may have for individual facilities as a function of any regulatory activity (e.g., New Source Performance Standard, NESHAP, New Source Review, operating permit). The major/area proportions shown in Appendix E are only for the purposes of the Section 112(k) inventory analysis.

4.0 DATA LIMITATIONS

As with the development of any inventory, the quality of the final estimate varies considerably from category to category. The quality of the TRI data on which much of the inventory is based is not known. Estimates provided by source category experts such as the data from the MACT program and OMS are expected to be the most accurate in the inventory. (Note that some of the data from the MACT program are not final as the NESHAPs have not yet been promulgated). For the calculated estimates, the most important factor influencing the quality of the estimate is the validity of the emission factor(s) used, in terms of absolute accuracy as well as representativeness for the processes to which it was applied. The activity data can also affect the quality of an emissions estimate, but activity data are usually easier to obtain and often have more credibility, especially when trying to determine national-scale numbers. Obtaining national-scale activity data that are reasonably valid was not that difficult during development of this inventory; however, the activity data for a few categories were questionable or practically nonexistent.

Despite the problems with limited data for some source categories, the intent of the Section 112(k) inventory process was satisfied reasonably well by the data in this report. National-scale emission estimates were generated that are thought to capture, at a minimum, 90 percent of the aggregate emissions of each potential Section 112(k) HAP. The quality of the estimates for some of the less important categories (in terms of emissions potential) can clearly be questioned due to limits on available input information; however, taken as a whole, the data presented here provide reasonable inputs and serve as a first step towards a Section 112(k) prioritization process.

4.1 TRI Data

In this inventory, a majority of the stationary source emission estimates were derived from the 1990 TRI reporting. Facilities are required to report chemical releases data to the TRI database on an annual basis if they are subject to Section 313 of the Emergency Planning and

Community Right-to-Know Act of 1986 (EPCRA), also known as Title III of the Superfund Amendments and Reauthorization Act (SARA). The reporting rule appears in 40 CFR Part 372. Under this rule, a facility must report emissions if:

- The facility has 10 or more full-time employees;
- The facility is classified under an SIC Code between 20 and 39²; and
- The facility manufactures or processes more than 12.5 tons per year of a listed chemical or the facility otherwise uses more than 5 tons per year of a listed chemical.

There are important limitations in using the TRI data as well as some benefits. One limitation is the possibility that a facility might not trigger the TRI data reporting requirements based on the chemical threshold criterion, but still be a HAP-emitting stationary source. For example, if a facility processes only 12 tons per year of a listed toxic chemical, that facility is not required to report to the TRI database, and many such area sources would not be included in the TRI database. Alternatively, a facility may erroneously equate use of a compound with emissions and overestimate their emissions. For example, virtually all of a compound may react or be consumed in the manufacturing process, and thus not be emitted.

Another shortcoming relates to the chemicals for which reporting is required. Of the 16-PAHs, only anthracene and naphthalene are TRI-reportable chemicals. Thus 16-PAH may be underestimated.

One of the most significant problems with using TRI data concerns the SIC Codes assigned to facilities. A facility may include multiple establishments that have different SIC Codes. TRI allows up to three SIC code identifications per database record. Because of the SIC Code criterion for TRI reporting, a major stationary source may perform activities in connection

² Facilities with other SIC Codes may also report to TRI. If emissions of Section 112(k) pollutants are reported, they are included in this inventory.

with a given SIC Code, but not be identified under that SIC Code in the TRI database. For example, a facility may comprise two establishments, one classified under an SIC Code between 20 and 39, and the other classified under a SIC Code outside of the 20 to 39 range. According to the SIC Code criterion for TRI reporting requirements, if the establishment classified under an SIC Code between 20 and 39 produces or ships products whose monetary value is less than the value of the other establishment's products and services, that facility is not required to report to the TRI database. Furthermore, if a facility reports under multiple SIC Codes, it is not possible to determine which portion of the emissions should be assigned to each SIC Code. For this inventory, the primary SIC Code was used to avoid double-counting of emissions.

Alternatively, the use of TRI-reported emissions may be adequate for some source categories compared to an estimate developed by combining production capacity with emission factors. For example, if all of the facilities in a source category fall within the TRI reporting requirements, the source category is well-characterized by its SIC Code, and if the facilities report their emissions accurately, then TRI data would best represent the source category.

4.2 Old or Limited Data

A significant issue for estimates based on emission factors is the datedness (from the 1980s) and/or very limited coverage for some source categories. This lack of data may be because the HAPs have not always been viewed as significant; therefore, little testing and emissions characterization work has been performed. This means that a very limited number of data points were available to characterize an entire category, without the benefit of knowing what the variability across the category may be. In some cases, there were no emissions data specific to a category, and surrogate data from a related source category had to be used to estimate emissions. While not optimal, this approach had to be adopted given the time and resource constraints of the Section 112(k) inventory program. Generally, however, the source categories for which this approach was used were not significant emitters of the given HAP.

The estimates that likely are the highest quality are those that were obtained from regulatory development program data. These estimates have the benefit of being based on recent test data, up-to-date activity and control information, and input from informed industry experts. In some instances, these estimates represent a summation of actual source test data for most or all sources in the category. These intensive estimates are of significantly higher quality than those derived through the use of an overall emission factor.

The estimates that have come from special intensive EPA studies such as the Reports to Congress on mercury and electric utilities also represent higher quality information due to the quantity and quality of the new research done to support these programs. Estimates based on emission factors from recent AP-42 updates (especially those with A- or B-rated factors) are also of relatively high quality, since the emission factors used are more likely to reflect the increased accuracy of recent test data as well as better source category representation.

Another concern with the development of the inventory estimates for potential Section 112(k) HAP source categories was the lack of emissions data for categories not constituting the top 60 to 70 percent of total national emissions. For categories that have already been identified as relatively significant sources of a given pollutant, more emphasis has been placed by industry and regulatory agencies on performing testing and deriving good quality emission factors. Less attention and emissions quantification have historically been paid to the remaining categories, which individually may contribute fewer total emissions but may constitute many individual sources. The emission factor data pool for smaller combustion sources (excluding utilities and large industrial sources), some of the waste disposal sources, nonroad mobile sources, and biomass burning sources could definitely benefit from more current and expanded information. To illustrate this point, HAP emission factors for commercial marine vessels are not available; instead stationary boiler emission factors were used.

A similar issue regarding the estimation process that was clearly undesirable, but also unavoidable in the context of the Section 112(k) inventory process, was the lack of available emissions data for some pollutant/source category combinations. For example, naphthalene and

anthracene data reported to TRI were used to represent 16-PAH emissions for a number of source categories. The overall quality implications for this type of situation are clear: national estimates of 16-PAH are likely to be underestimated.

4.3 Source Category-specific Limitations

Another factor that limits the quality and completeness of the final inventory is the fact that, in some cases, categories were suspected or known to be emitters of the potential Section 112(k) HAPs, but it was not possible to develop emission estimates. At this time, the expected relative magnitude of these sources as pollutant emitters is unknown. To the extent possible, TRI data were used to fill these gaps. However, as discussed in Section 4.1, there are limitations to TRI as well. For instance, if the source category does not report to TRI, like municipal landfills, no additional data are available.

5.0 QUALITY ASSURANCE/QUALITY CONTROL

Preparation of the Section 112(k) HAP emissions inventory went beyond conducting literature searches, reviewing data to identify emission sources and emission estimation methods, and developing emissions estimates. A key part of the inventory development process also included review of the emission estimates and methods. The following discussion summarizes the QA/QC procedures implemented during the inventory development process.

Inventory development team members were required to provide internal technical reviewers with a printout of the appropriate spreadsheet, database, and text discussion for each emission estimate developed. The internal technical reviewers were members of the inventory development team, but were responsible for developing emissions estimates for source categories other than the ones they were reviewing. Included in the information provided to the reviewers were copies of the reference materials used in developing the emissions estimates. In cases where spreadsheets were used extensively, the reviewers were also given an electronic copy of the file.

To check the inventory for completeness, the reviewers determined if estimates for all source categories had been developed using all available information. Prior to review, gaps in the data were flagged by the inventory development team and an explanation for an excluded source category was provided to the reviewers (e.g., the activity data needed to develop the estimates were not available). For each source category, the reviewers determined if estimates for all pollutants emitted by the category had been developed, assuming the information was available. This determination was primarily made by reviewing the emission estimate or emission factor data and verifying that an estimate was shown for each potential Section 112(k) HAP for which there was information.

Two approaches were used to review the emission estimation methodology. The first pertained to the direct use of a previously developed national emissions estimate. When existing estimates were used in the Section 112(k) inventory, the reviewers determined if the estimate was

correctly transcribed by reviewing the original data source. For estimates prepared by the inventory development team, the reviewers first determined if the activity data and emission factors used were compatible. For example, if the activity data were presented in units of material produced and the emission factor was in units of material consumed, the two would not be compatible. The reviewers also checked to see that the activity data and emission factors were correctly copied from original references. In most cases, all of the calculations were checked.

The reviewers also determined if the references were cited for all of the information used to develop the estimate. This part of the review also included verifying that copies of the reference materials had been submitted to the project file.

The overall observations of the reviewer were then recorded on a Source Category Review Form (Figure 5-1). The individual responsible for the estimate then provided a written response to each of the reviewer's comments.

The second phase of the QA/QC process was performed by another individual. This review step was not necessarily a duplication of the earlier review, but was a review of the data from a different perspective. The following items were considered in this second review stage:

- Methodology--Was an acceptable methodology used to estimate emissions?
- Completeness--Have estimates been developed where information to do so is sufficient? For example, if an emission factor was identified for a source category/pollutant during the data collection phase and an estimate was not developed, verify that no activity data are available. Verify that sources that one would expect to be significant are included in the inventory. If these sources are insignificant sources in the Section 112(k) inventory, try to determine why.
- Allocations--Are the major/area and urban/rural proportions appropriate for the source category?

Section 112(k) Inventory QA/QC Source Category Review Form

Category Description:

Name (person responsible for calculations):

Signature of Reviewer:

Date:

Checklist	Yes	No	Could not be determined
Were pollutant, source category group, and source category codes appropriate for the estimates?			
Is the base year correct?			
Is the number of facilities correct?			
For Existing Estimates			
Is the source of the emission estimate clearly referenced and a copy provided in the docket file?			
Were the estimates correctly transcribed?			
For New Estimates			
Were all speciation profiles and emission factors clearly referenced and copies provided in the docket file?			
Were all speciation profiles and emission factors correctly transcribed in the calculation?			
Were all activity data clearly referenced and copies provided in the docket file?			
Were all activity data correctly transcribed?			
Are the activity data appropriate for the emission factors used?			

Note: Check at least 20 percent of calculations for computational errors.

Comments:

Figure 5-1.

Section 112(k) Inventory QA/QC Source Category Review Form

6.0 BASE YEAR 1990 NATIONAL EMISSIONS BY POLLUTANT

In this section, Tables 6-1 through 6-41 present the 1990 base year emissions estimates for each potential Section 112(k) HAP by source category. Details on emissions and emission estimation methods for the individual source categories can be found in Appendices A through D. To best fulfill the requirements of Sections 112(k) and 112(c)(3) of the CAA, the total emissions are delineated into the urban/rural and major/area/mobile proportions.

**Table 6 - 1 Base Year 1990 National Emission Estimates for
1,1,2,2-Tetrachloroethane**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Municipal Landfills	2.16E+02	84.06	1.48E+01	1.35E+02	0.00E+00	1.50E+02	3.03E+00	2.75E+01	0.00E+00	3.06E+01	1.80E+02
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	1.63E+01	6.37	6.02E+00	0.00E+00	0.00E+00	6.02E+00	9.75E+00	0.00E+00	0.00E+00	9.75E+00	1.58E+01
Sewage Sludge Incineration	1.12E+01	4.35	0.00E+00	9.20E+00	0.00E+00	9.20E+00	0.00E+00	1.47E+00	0.00E+00	1.47E+00	1.07E+01
Tire Production	6.21E+00	2.42	2.11E+00	2.13E-02	0.00E+00	2.13E+00	2.50E+00	2.52E-02	0.00E+00	2.52E+00	4.65E+00
Rubber and Plastic Hose and Belting Manufacturing	5.00E+00	1.95	5.00E+00	0.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E+00
Secondary Lead Smelting	5.17E-01	0.20	3.58E-01	3.11E-02	0.00E+00	3.89E-01	7.31E-03	6.35E-04	0.00E+00	7.94E-03	3.97E-01
MON	5.15E-01	0.20	3.74E-01	3.77E-03	0.00E+00	3.77E-01	6.06E-02	6.12E-04	0.00E+00	6.12E-02	4.38E-01
Chemicals and Allied Products Manufacturing	3.24E-01	0.13	3.24E-01	0.00E+00	0.00E+00	3.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.24E-01
Industrial Organic Chemicals Manufacturing	2.88E-01	0.11	3.50E-02	3.50E-03	0.00E+00	3.85E-02	2.49E-01	0.00E+00	0.00E+00	2.49E-01	2.88E-01
Polymers & Resins (I, II, and IV)	2.50E-01	0.10	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Publicly Owned Treatment Works (POTW) Emissions	1.10E-01	0.04	3.03E-03	7.33E-02	0.00E+00	7.63E-02	6.18E-04	1.50E-02	0.00E+00	1.56E-02	9.19E-02
Clay Products Manufacturing	1.06E-01	0.04	1.05E-01	0.00E+00	0.00E+00	1.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-01
Hydrochloric Acid Production	6.35E-02	0.02	3.51E-02	5.34E-04	0.00E+00	3.56E-02	2.10E-03	3.20E-05	0.00E+00	2.13E-03	3.77E-02
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	1.85E-02	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chemical Preparations	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Cement, Hydraulic (not subject to Portland Cement MACT)	1.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**Table 6 - 2 Base Year 1990 National Emission Estimates for
1,1,2-Trichloroethane**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Pulp and Paper Production (non-combustion) MACT I	3.76E+02	50.51	7.03E+01	0.00E+00	0.00E+00	7.03E+01	1.29E+02	0.00E+00	0.00E+00	1.29E+02	1.99E+02
Special Industry Machinery Manufacturing	1.34E+02	18.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E+02	0.00E+00	0.00E+00	1.34E+02	1.34E+02
MON	6.73E+01	9.04	4.88E+01	4.93E-01	0.00E+00	4.93E+01	7.92E+00	8.00E-02	0.00E+00	8.00E+00	5.73E+01
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	5.15E+01	6.92	1.14E+01	0.00E+00	0.00E+00	1.14E+01	3.89E+01	0.00E+00	0.00E+00	3.89E+01	5.04E+01
Pharmaceuticals Production	4.94E+01	6.64	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Industrial Organic Chemicals Manufacturing	2.22E+01	2.98	2.18E+01	7.50E-03	0.00E+00	2.18E+01	3.39E-01	0.00E+00	0.00E+00	3.39E-01	2.22E+01
Chemical Preparations	1.50E+01	2.02	1.50E+01	0.00E+00	0.00E+00	1.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E+01
Surgical and Medical Instruments Manufacturing	1.14E+01	1.53	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tire Production	6.85E+00	0.92	2.32E+00	2.35E-02	0.00E+00	2.35E+00	2.75E+00	2.78E-02	0.00E+00	2.78E+00	5.13E+00
Photographic Equipment And Supplies	6.34E+00	0.85	3.02E+00	3.33E+00	0.00E+00	6.34E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.34E+00
Paints and Allied Products Manufacturing	2.23E+00	0.30	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E+00	0.00E+00	0.00E+00	2.23E+00	2.23E+00
Steel Foundries	1.03E+00	0.14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E+00	0.00E+00	1.03E+00	1.03E+00
Chemicals and Allied Products Manufacturing	5.14E-01	0.07	5.14E-01	0.00E+00	0.00E+00	5.14E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.14E-01
Hydrochloric Acid Production	3.95E-01	0.05	2.18E-01	3.32E-03	0.00E+00	2.21E-01	1.31E-02	1.99E-04	0.00E+00	1.33E-02	2.35E-01
Clay Products Manufacturing	1.58E-01	0.02	1.58E-01	0.00E+00	0.00E+00	1.58E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-01
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	7.55E-02	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Publicly Owned Treatment Works (POTW) Emissions	7.00E-02	0.01	1.93E-03	4.66E-02	0.00E+00	4.86E-02	3.94E-04	9.52E-03	0.00E+00	9.91E-03	5.85E-02

**Table 6 - 2 Base Year 1990 National Emission Estimates for
1,1,2-Trichloroethane**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Meat Packing Plants	4.10E-02	0.01	4.10E-02	0.00E+00	0.00E+00	4.10E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-02
Petroleum Bulk Stations and Terminals (not subject to Petroleum Refining MACT)	2.10E-02	< 0.01	2.10E-02	0.00E+00	0.00E+00	2.10E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E-02
Women's Footwear, Except Athletic	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	2.50E-03
Cement, Hydraulic (not subject to Portland Cement MACT)	5.00E-04	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**Table 6 - 3 Base Year 1990 National Emission Estimates for
1,2-Dichloropropane**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Photographic Equipment And Supplies	1.95E+02	29.66	1.95E+02	0.00E+00	0.00E+00	1.95E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E+02
Chemical Preparations	1.39E+02	21.21	1.39E+02	0.00E+00	0.00E+00	1.39E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E+02
MON	1.07E+02	16.29	7.77E+01	7.85E-01	0.00E+00	7.85E+01	1.26E+01	1.27E-01	0.00E+00	1.27E+01	9.12E+01
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	1.02E+02	15.57	7.54E+01	0.00E+00	0.00E+00	7.54E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.54E+01
Gum and Wood Chemical Manufacturing	6.65E+01	10.11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Municipal Landfills	2.36E+01	3.58	1.62E+00	1.47E+01	0.00E+00	1.63E+01	3.30E-01	3.01E+00	0.00E+00	3.34E+00	1.97E+01
Polymers & Resins (I, II, and IV)	1.30E+01	1.98	1.30E+01	0.00E+00	0.00E+00	1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E+01
Tire Production	6.85E+00	1.04	2.32E+00	2.35E-02	0.00E+00	2.35E+00	2.75E+00	2.78E-02	0.00E+00	2.78E+00	5.13E+00
Industrial Organic Chemicals Manufacturing	2.30E+00	0.35	2.30E+00	0.00E+00	0.00E+00	2.30E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E+00
Publicly Owned Treatment Works (POTW) Emissions	7.20E-01	0.11	1.98E-02	4.80E-01	0.00E+00	5.00E-01	4.05E-03	9.79E-02	0.00E+00	1.02E-01	6.01E-01
Petroleum Refining (not subject to Petroleum Refining MACT)	6.65E-01	0.10	6.65E-01	0.00E+00	0.00E+00	6.65E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.65E-01
Agricultural Chemicals and Pesticides	2.60E-02	< 0.01	2.60E-02	0.00E+00	0.00E+00	2.60E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.60E-02

**Table 6 - 4 Base Year 1990 National Emission Estimates for
1,3-Butadiene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Mobile Sources: On-Road Vehicles	3.69E+04	51.36	0.00E+00	0.00E+00	1.83E+04	1.83E+04	0.00E+00	0.00E+00	6.26E+03	6.26E+03	2.45E+04
Open Burning: Forest and Wildfires	1.07E+04	14.93	0.00E+00	6.44E+02	0.00E+00	6.44E+02	0.00E+00	1.61E+03	0.00E+00	1.61E+03	2.25E+03
Mobile Sources: Non-Road Vehicles and Equipment - Other	1.01E+04	14.01	0.00E+00	0.00E+00	6.99E+03	6.99E+03	0.00E+00	0.00E+00	1.43E+03	1.43E+03	8.41E+03
Open Burning: Prescribed Burnings	9.20E+03	12.79	0.00E+00	1.38E+03	0.00E+00	1.38E+03	0.00E+00	2.02E+03	0.00E+00	2.02E+03	3.40E+03
Polymers & Resins (I, II, and IV)	1.12E+03	1.56	7.46E+02	2.81E+01	0.00E+00	7.74E+02	3.23E+02	1.50E-01	0.00E+00	3.23E+02	1.10E+03
Industrial Organic Chemicals Manufacturing	1.08E+03	1.50	9.53E+02	6.01E+00	0.00E+00	9.59E+02	6.73E+01	2.50E-01	0.00E+00	6.76E+01	1.03E+03
MON	1.01E+03	1.40	7.31E+02	7.38E+00	0.00E+00	7.38E+02	1.19E+02	1.20E+00	0.00E+00	1.20E+02	8.58E+02
Mobile Sources: Non-Road Vehicles and Equipment - Aircraft	8.33E+02	1.16	0.00E+00	0.00E+00	7.19E+02	7.19E+02	0.00E+00	0.00E+00	8.79E+01	8.79E+01	8.07E+02
Secondary Lead Smelting	5.30E+02	0.74	3.67E+02	3.19E+01	0.00E+00	3.99E+02	7.49E+00	6.51E-01	0.00E+00	8.14E+00	4.07E+02
Petroleum Refining (not subject to Petroleum Refining MACT)	1.75E+02	0.24	1.39E+02	1.33E+00	0.00E+00	1.40E+02	1.43E+01	2.70E-01	0.00E+00	1.45E+01	1.55E+02
Agricultural Chemicals and Pesticides	1.06E+02	0.15	3.94E+01	0.00E+00	0.00E+00	3.94E+01	6.65E+01	0.00E+00	0.00E+00	6.65E+01	1.06E+02
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	3.59E+01	0.05	3.59E+01	0.00E+00	0.00E+00	3.59E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.59E+01
Hydrochloric Acid Production	3.57E+01	0.05	1.97E+01	3.00E-01	0.00E+00	2.00E+01	1.18E+00	1.80E-02	0.00E+00	1.20E+00	2.12E+01
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	2.38E+01	0.03	1.30E+01	0.00E+00	0.00E+00	1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E+01
Industrial Inorganic Chemical Manufacturing	8.36E+00	0.01	8.36E+00	0.00E+00	0.00E+00	8.36E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.36E+00
Tire Production	6.04E+00	0.01	2.05E+00	2.07E-02	0.00E+00	2.07E+00	2.42E+00	2.45E-02	0.00E+00	2.45E+00	4.52E+00
Meat Packing Plants	2.65E+00	< 0.01	2.65E+00	0.00E+00	0.00E+00	2.65E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.65E+00

**Table 6 - 4 Base Year 1990 National Emission Estimates for
1,3-Butadiene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Uranium Hexafluoride Production	2.12E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Reinforced Plastic Composites Production	1.61E+00	< 0.01	8.94E-01	1.35E-01	0.00E+00	1.03E+00	3.62E-01	5.45E-02	0.00E+00	4.16E-01	1.44E+00
Publicly Owned Treatment Works (POTW) Emissions	1.58E+00	< 0.01	4.35E-02	1.05E+00	0.00E+00	1.10E+00	8.88E-03	2.15E-01	0.00E+00	2.24E-01	1.32E+00
Chemical Preparations	8.45E-01	< 0.01	0.00E+00	8.45E-01	0.00E+00	8.45E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.45E-01
Industrial Gases Manufacturing	2.50E-01	< 0.01	2.50E-01	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Wet Corn Milling	2.50E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01	0.00E+00	2.50E-01	2.50E-01
Coke By-Product Plants	1.30E-01	< 0.01	9.75E-02	0.00E+00	0.00E+00	9.75E-02	1.86E-02	0.00E+00	0.00E+00	1.86E-02	1.16E-01
Motor and Generators Manufacturing	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Polyvinyl Chloride and Copolymers Production	4.78E-02	< 0.01	3.27E-02	1.90E-03	0.00E+00	3.46E-02	8.62E-03	5.01E-04	0.00E+00	9.12E-03	4.37E-02
Petroleum Refineries: Catalytic Cracking (Fluid and other) Units, Catalytic Reforming Units, and Sulfur Plant Units	3.42E-02	< 0.01	2.08E-02	0.00E+00	0.00E+00	2.08E-02	8.55E-03	0.00E+00	0.00E+00	8.55E-03	2.93E-02
Commercial Physical Research	4.00E-03	< 0.01	0.00E+00	4.00E-03	0.00E+00	4.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-03

**Table 6 - 5 Base Year 1990 National Emission Estimates for
1,3-Dichloropropene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Consumer Products Usage	1.99E+04	99.82	0.00E+00	1.38E+04	0.00E+00	1.38E+04	0.00E+00	2.82E+03	0.00E+00	2.82E+03	1.66E+04
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	2.28E+01	0.11	2.28E+01	0.00E+00	0.00E+00	2.28E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E+01
MON	5.31E+00	0.03	3.85E+00	3.89E-02	0.00E+00	3.89E+00	6.24E-01	6.30E-03	0.00E+00	6.30E-01	4.52E+00
Industrial Organic Chemicals Manufacturing	4.75E+00	0.02	4.75E+00	0.00E+00	0.00E+00	4.75E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.75E+00
Industrial Inorganic Chemical Manufacturing	1.56E+00	0.01	0.00E+00	1.56E+00	0.00E+00	1.56E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E+00
Secondary Lead Smelting	7.87E-01	< 0.01	5.45E-01	4.74E-02	0.00E+00	5.93E-01	1.11E-02	9.67E-04	0.00E+00	1.21E-02	6.05E-01
Agricultural Chemicals and Pesticides	4.30E-01	< 0.01	1.80E-01	0.00E+00	0.00E+00	1.80E-01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	4.30E-01
Polymers & Resins (I, II, and IV)	2.41E-01	< 0.01	2.41E-01	0.00E+00	0.00E+00	2.41E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E-01

**Table 6 - 6 Base Year 1990 National Emission Estimates for
1,4-Dichlorobenzene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Consumer Products Usage	4.38E+03	85.04	0.00E+00	3.04E+03	0.00E+00	3.04E+03	0.00E+00	6.20E+02	0.00E+00	6.20E+02	3.66E+03
Chemical Manufacturing: p-Dichlorobenzene (1,4-)	2.94E+02	5.71	2.23E+02	4.56E+00	0.00E+00	2.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E+02
Paper and Other Webs (Surface Coating)	1.83E+02	3.55	1.41E+02	3.30E+00	0.00E+00	1.44E+02	1.80E+01	0.00E+00	0.00E+00	1.80E+01	1.62E+02
Hydrochloric Acid Production	1.73E+02	3.36	9.55E+01	1.45E+00	0.00E+00	9.70E+01	5.72E+00	8.71E-02	0.00E+00	5.81E+00	1.03E+02
MON	7.07E+01	1.37	5.13E+01	5.18E-01	0.00E+00	5.18E+01	8.32E+00	8.40E-02	0.00E+00	8.40E+00	6.02E+01
Chemical Manufacturing: p-Dichlorobenzene (Storage Emissions)	1.76E+01	0.34	1.34E+01	2.74E-01	0.00E+00	1.37E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E+01
Publicly Owned Treatment Works (POTW) Emissions	1.35E+01	0.26	3.73E-01	9.01E+00	0.00E+00	9.39E+00	7.61E-02	1.84E+00	0.00E+00	1.92E+00	1.13E+01
Tire Production	6.62E+00	0.13	2.25E+00	2.27E-02	0.00E+00	2.27E+00	2.66E+00	2.68E-02	0.00E+00	2.68E+00	4.95E+00
Polishes and Sanitation Goods Manufacturing	4.20E+00	0.08	0.00E+00	4.20E+00	0.00E+00	4.20E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.20E+00
Industrial Organic Chemicals Manufacturing	3.43E+00	0.07	0.00E+00	1.29E-01	0.00E+00	1.29E-01	3.30E+00	0.00E+00	0.00E+00	3.30E+00	3.43E+00
Soaps, Cleaners, and Toilet Goods	3.19E+00	0.06	0.00E+00	3.19E+00	0.00E+00	3.19E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E+00
Sewage Sludge Incineration	7.41E-01	0.01	0.00E+00	6.11E-01	0.00E+00	6.11E-01	0.00E+00	9.77E-02	0.00E+00	9.77E-02	7.09E-01
Soap and Other Detergents Manufacturing	3.60E-01	0.01	3.60E-01	0.00E+00	0.00E+00	3.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.60E-01
Clay Products Manufacturing	2.30E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cement, Hydraulic (not subject to Portland Cement MACT)	1.75E-02	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chemicals and Allied Products Manufacturing	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Agricultural Chemicals and Pesticides	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03

**Table 6 - 7 Base Year 1990 National Emission Estimates for
Acetaldehyde**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Mobile Sources: Non-Road Vehicles and Equipment - Other	3.53E+04	25.69	0.00E+00	0.00E+00	2.45E+04	2.45E+04	0.00E+00	0.00E+00	5.00E+03	5.00E+03	2.95E+04
Mobile Sources: On- Road Vehicles	2.82E+04	20.48	0.00E+00	0.00E+00	1.39E+04	1.39E+04	0.00E+00	0.00E+00	4.78E+03	4.78E+03	1.87E+04
Open Burning: Forest and Wildfires	2.76E+04	20.04	0.00E+00	1.65E+03	0.00E+00	1.65E+03	0.00E+00	4.13E+03	0.00E+00	4.13E+03	5.79E+03
Open Burning: Prescribed Burnings	2.18E+04	15.88	0.00E+00	3.28E+03	0.00E+00	3.28E+03	0.00E+00	4.80E+03	0.00E+00	4.80E+03	8.08E+03
Pulp and Paper Production (non-combustion) MACT I	8.95E+03	6.51	1.67E+03	0.00E+00	0.00E+00	1.67E+03	3.06E+03	0.00E+00	0.00E+00	3.06E+03	4.73E+03
Pulp and Paper Production (combustion) MACT II	3.86E+03	2.81	7.20E+02	0.00E+00	0.00E+00	7.20E+02	1.32E+03	0.00E+00	0.00E+00	1.32E+03	2.04E+03
Stationary Internal Combustion Engines	2.38E+03	1.73	9.58E+02	6.39E+02	0.00E+00	1.60E+03	2.14E+02	1.43E+02	0.00E+00	3.57E+02	1.95E+03
MON	2.33E+03	1.69	1.69E+03	1.70E+01	0.00E+00	1.70E+03	2.74E+02	2.76E+00	0.00E+00	2.76E+02	1.98E+03
Mobile Sources: Non-Road Vehicles and Equipment - Aircraft	2.04E+03	1.49	0.00E+00	0.00E+00	1.76E+03	1.76E+03	0.00E+00	0.00E+00	2.16E+02	2.16E+02	1.98E+03
Polymers & Resins (I, II, and IV)	1.79E+03	1.30	8.54E+02	1.28E-01	0.00E+00	8.54E+02	1.34E+02	0.00E+00	0.00E+00	1.34E+02	9.88E+02
Formaldehyde, Acrolein, Acetaldehyde, Butyraldehyde Production	1.40E+03	1.02	2.49E+02	0.00E+00	0.00E+00	2.49E+02	1.15E+03	0.00E+00	0.00E+00	1.15E+03	1.40E+03
Industrial Organic Chemicals Manufacturing	1.03E+03	0.75	5.48E+02	2.50E+00	0.00E+00	5.50E+02	4.48E+02	3.25E+00	0.00E+00	4.51E+02	1.00E+03
Nutritional Yeast Manufacturing	2.54E+02	0.18	1.87E+02	1.63E+01	0.00E+00	2.03E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E+02
Industrial Inorganic Chemical Manufacturing	8.87E+01	0.06	8.85E+01	1.76E-01	0.00E+00	8.87E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.87E+01
Photographic Equipment And Supplies	7.05E+01	0.05	1.00E+01	0.00E+00	0.00E+00	1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+01
Stationary Combustion Turbines	6.96E+01	0.05	2.33E+01	2.33E+01	0.00E+00	4.66E+01	5.22E+00	5.22E+00	0.00E+00	1.04E+01	5.71E+01
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	6.09E+01	0.04	5.91E+01	1.85E+00	0.00E+00	6.09E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.09E+01

**Table 6 - 7 Base Year 1990 National Emission Estimates for
Acetaldehyde**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Utility Boilers - Coal	5.80E+01	0.04	2.24E+01	0.00E+00	0.00E+00	2.24E+01	1.46E+01	0.00E+00	0.00E+00	1.46E+01	3.70E+01
Softwood Drying Kilns	4.20E+01	0.03	0.00E+00	7.94E+00	0.00E+00	7.94E+00	0.00E+00	8.83E+00	0.00E+00	8.83E+00	1.68E+01
Distilled and Blended Liquors Production	4.00E+01	0.03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00E+00	4.00E+01	4.00E+01
Beet Sugar	3.35E+01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E+01	0.00E+00	0.00E+00	1.91E+01	1.91E+01
Unsupported Plastics Film & Sheet	2.71E+01	0.02	2.71E+01	0.00E+00	0.00E+00	2.71E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.71E+01
Publicly Owned Treatment Works (POTW) Emissions	1.95E+01	0.01	5.37E-01	1.30E+01	0.00E+00	1.35E+01	1.10E-01	2.65E+00	0.00E+00	2.76E+00	1.63E+01
Industrial Boilers	1.83E+01	0.01	1.00E+01	2.21E+00	0.00E+00	1.22E+01	2.25E+00	4.95E-01	0.00E+00	2.74E+00	1.50E+01
Institutional/Commercial Heating	1.63E+01	0.01	0.00E+00	1.27E+01	0.00E+00	1.27E+01	0.00E+00	2.11E+00	0.00E+00	2.11E+00	1.48E+01
Residential Heating: Distillate Oil Combustion	1.48E+01	0.01	0.00E+00	1.03E+01	0.00E+00	1.03E+01	0.00E+00	2.10E+00	0.00E+00	2.10E+00	1.24E+01
Utility Boilers - Oil	5.00E+00	< 0.01	2.88E+00	1.24E+00	0.00E+00	4.12E+00	4.80E-01	2.06E-01	0.00E+00	6.86E-01	4.80E+00
Plywood/Particle Board Manufacturing	4.68E+00	< 0.01	3.65E-01	9.35E-03	0.00E+00	3.74E-01	1.46E+00	3.75E-02	0.00E+00	1.50E+00	1.87E+00
Mobile Sources: Non-Road Vehicles and Equipment - Commercial Marine Vessels	3.87E+00	< 0.01	0.00E+00	0.00E+00	3.87E+00	3.87E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.87E+00
Food Preparations Production	3.84E+00	< 0.01	0.00E+00	3.84E+00	0.00E+00	3.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E+00
Chemical Manufacturing: Phenol Manufacturing	3.66E+00	< 0.01	2.60E+00	5.31E-02	0.00E+00	2.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.66E+00
Chemical Preparations	3.28E+00	< 0.01	1.73E+00	0.00E+00	0.00E+00	1.73E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E+00
Secondary Lead Smelting	2.80E+00	< 0.01	1.94E+00	1.69E-01	0.00E+00	2.11E+00	3.96E-02	3.44E-03	0.00E+00	4.30E-02	2.15E+00
Tire Production	2.37E+00	< 0.01	8.04E-01	8.12E-03	0.00E+00	8.12E-01	9.51E-01	9.61E-03	0.00E+00	9.61E-01	1.77E+00

Table 6 - 7 Base Year 1990 National Emission Estimates for Acetaldehyde

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	1.72E+00	< 0.01	3.83E-01	0.00E+00	0.00E+00	3.83E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.83E-01
Wet Corn Milling	7.75E-01	< 0.01	0.00E+00	7.75E-01	0.00E+00	7.75E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.75E-01
Residential Heating: Bituminous and Lignite Coal Combustion	5.50E-01	< 0.01	0.00E+00	3.82E-01	0.00E+00	3.82E-01	0.00E+00	7.79E-02	0.00E+00	7.79E-02	4.59E-01
Utility Boilers - Coke	2.65E-01	< 0.01	1.99E-01	0.00E+00	0.00E+00	1.99E-01	3.79E-02	0.00E+00	0.00E+00	3.79E-02	2.37E-01
Residential Heating: Anthracite Coal Combustion	2.09E-01	< 0.01	0.00E+00	1.45E-01	0.00E+00	1.45E-01	0.00E+00	2.96E-02	0.00E+00	2.96E-02	1.75E-01
Sewage Sludge Incineration	1.49E-01	< 0.01	0.00E+00	1.23E-01	0.00E+00	1.23E-01	0.00E+00	1.96E-02	0.00E+00	1.96E-02	1.42E-01
Petroleum Refineries: Catalytic Cracking (Fluid and other) Units, Catalytic Reforming Units, and Sulfur Plant Units	3.42E-02	< 0.01	2.08E-02	0.00E+00	0.00E+00	2.08E-02	8.55E-03	0.00E+00	0.00E+00	8.55E-03	2.93E-02
Flavoring Extracts and Syrups Production	2.85E-02	< 0.01	0.00E+00	2.85E-02	0.00E+00	2.85E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.85E-02
Residential Heating: Natural Gas Combustion	2.80E-02	< 0.01	0.00E+00	1.94E-02	0.00E+00	1.94E-02	0.00E+00	3.96E-03	0.00E+00	3.96E-03	2.34E-02
Utility Boilers - Natural Gas	1.59E-02	< 0.01	0.00E+00	9.00E-03	0.00E+00	9.00E-03	0.00E+00	4.35E-03	0.00E+00	4.35E-03	1.34E-02
Chemicals and Allied Products, nec	3.00E-03	< 0.01	0.00E+00	3.00E-03	0.00E+00	3.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-03

Table 6 - 8 Base Year 1990 National Emission Estimates for Acrolein

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Open Burning: Forest and Wildfires	2.23E+04	35.63	0.00E+00	1.34E+03	0.00E+00	1.34E+03	0.00E+00	3.35E+03	0.00E+00	3.35E+03	4.69E+03
Open Burning: Prescribed Burnings	1.77E+04	28.23	0.00E+00	2.65E+03	0.00E+00	2.65E+03	0.00E+00	3.89E+03	0.00E+00	3.89E+03	6.55E+03
Structure Fires	9.56E+03	15.26	0.00E+00	6.63E+03	0.00E+00	6.63E+03	0.00E+00	1.35E+03	0.00E+00	1.35E+03	7.99E+03
Mobile Sources: On-Road Vehicles	5.58E+03	8.91	0.00E+00	0.00E+00	2.76E+03	2.76E+03	0.00E+00	0.00E+00	9.47E+02	9.47E+02	3.71E+03
Mobile Sources: Non-Road Vehicles and Equipment - Other	5.55E+03	8.86	0.00E+00	0.00E+00	3.85E+03	3.85E+03	0.00E+00	0.00E+00	7.86E+02	7.86E+02	4.64E+03
Mobile Sources: Non-Road Vehicles and Equipment - Aircraft	9.66E+02	1.54	0.00E+00	0.00E+00	8.34E+02	8.34E+02	0.00E+00	0.00E+00	1.02E+02	1.02E+02	9.36E+02
Formaldehyde, Acrolein, Acetaldehyde, Butyraldehyde Production	3.94E+02	0.63	7.00E+01	0.00E+00	0.00E+00	7.00E+01	3.24E+02	0.00E+00	0.00E+00	3.24E+02	3.94E+02
Pulp and Paper Production (non-combustion) MACT I	2.83E+02	0.45	5.29E+01	0.00E+00	0.00E+00	5.29E+01	9.68E+01	0.00E+00	0.00E+00	9.68E+01	1.50E+02
Mobile Sources: Non-Road Vehicles and Equipment - Locomotives	1.15E+02	0.18	0.00E+00	0.00E+00	7.99E+01	7.99E+01	0.00E+00	0.00E+00	1.63E+01	1.63E+01	9.62E+01
Mobile Sources: Non-Road Vehicles and Equipment - Commercial Marine Vessels	1.02E+02	0.16	0.00E+00	0.00E+00	1.02E+02	1.02E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E+02
Utility Boilers - Coal	2.80E+01	0.04	1.08E+01	0.00E+00	0.00E+00	1.08E+01	7.07E+00	0.00E+00	0.00E+00	7.07E+00	1.79E+01
Publicly Owned Treatment Works (POTW) Emissions	2.41E+01	0.04	6.64E-01	1.61E+01	0.00E+00	1.67E+01	1.36E-01	3.28E+00	0.00E+00	3.41E+00	2.01E+01
Tire Production	1.90E+01	0.03	6.47E+00	6.53E-02	0.00E+00	6.53E+00	7.65E+00	7.72E-02	0.00E+00	7.72E+00	1.43E+01
Secondary Lead Smelting	1.11E+01	0.02	7.69E+00	6.69E-01	0.00E+00	8.36E+00	1.57E-01	1.36E-02	0.00E+00	1.71E-01	8.53E+00
Industrial Boilers	5.55E+00	0.01	3.35E+00	3.72E-01	0.00E+00	3.72E+00	7.49E-01	8.32E-02	0.00E+00	8.32E-01	4.55E+00
MON	2.48E+00	< 0.01	1.80E+00	1.82E-02	0.00E+00	1.82E+00	2.92E-01	2.95E-03	0.00E+00	2.95E-01	2.11E+00
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	2.17E+00	< 0.01	2.17E+00	0.00E+00	0.00E+00	2.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E+00

Table 6 - 8 Base Year 1990 National Emission Estimates for Acrolein

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	
Institutional/Commercial Heating	5.91E-01	< 0.01	0.00E+00	4.61E-01	0.00E+00	4.61E-01	0.00E+00	7.68E-02	0.00E+00	7.68E-02	5.37E-01
Industrial Organic Chemicals Manufacturing	3.18E-01	< 0.01	3.01E-01	0.00E+00	0.00E+00	3.01E-01	1.70E-02	0.00E+00	0.00E+00	1.70E-02	3.18E-01
Residential Heating: Bituminous and Lignite Coal Combustion	2.80E-01	< 0.01	0.00E+00	1.94E-01	0.00E+00	1.94E-01	0.00E+00	3.96E-02	0.00E+00	3.96E-02	2.34E-01
Utility Boilers - Coke	1.35E-01	< 0.01	1.01E-01	0.00E+00	0.00E+00	1.01E-01	1.93E-02	0.00E+00	0.00E+00	1.93E-02	1.21E-01
Industrial Inorganic Chemical Manufacturing	1.25E-01	< 0.01	1.25E-01	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Residential Heating: Anthracite Coal Combustion	1.06E-01	< 0.01	0.00E+00	7.35E-02	0.00E+00	7.35E-02	0.00E+00	1.50E-02	0.00E+00	1.50E-02	8.86E-02
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	4.55E-02	< 0.01	4.55E-02	0.00E+00	0.00E+00	4.55E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.55E-02
Polymers & Resins (I, II, and IV)	6.00E-03	< 0.01	6.00E-03	0.00E+00	0.00E+00	6.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.00E-03
Chemical Preparations	1.00E-03	< 0.01	1.00E-03	0.00E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-03

Table 6 - 9 Base Year 1990 National Emission Estimates for Acrylamide

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Industrial Organic Chemicals Manufacturing	1.87E+01	53.00	1.75E+01	2.53E-01	0.00E+00	1.78E+01	3.46E-01	5.95E-01	0.00E+00	9.41E-01	1.87E+01
MON	1.09E+01	30.87	7.91E+00	7.99E-02	0.00E+00	7.99E+00	1.28E+00	1.30E-02	0.00E+00	1.30E+00	9.29E+00
Polymers & Resins (I, II, and IV)	4.29E+00	12.15	2.61E+00	1.41E+00	0.00E+00	4.02E+00	0.00E+00	2.62E-01	0.00E+00	2.62E-01	4.29E+00
Chemical Preparations	7.34E-01	2.08	1.91E-01	2.92E-01	0.00E+00	4.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.84E-01
Hydrochloric Acid Production	2.50E-01	0.71	1.38E-01	2.10E-03	0.00E+00	1.40E-01	8.26E-03	1.26E-04	0.00E+00	8.39E-03	1.49E-01
Industrial Inorganic Chemical Manufacturing	1.66E-01	0.47	1.66E-01	0.00E+00	0.00E+00	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-01
Metal Barrels, Drums, and Pails Manufacturing	1.25E-01	0.35	1.25E-01	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Paints and Allied Products Manufacturing	1.25E-01	0.35	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	5.00E-03	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Adhesives and Sealants	2.50E-03	0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Paper and Other Webs (Surface Coating)	1.00E-03	< 0.01	0.00E+00	1.00E-03	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-03

Table 6 - 10 Base Year 1990 National Emission Estimates for Acrylonitrile

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Polymers & Resins (I, II, and IV)	9.90E+02	38.79	2.07E+02	2.70E+00	0.00E+00	2.10E+02	6.13E+02	3.42E+00	0.00E+00	6.17E+02	8.27E+02
MON	4.75E+02	18.61	3.44E+02	3.48E+00	0.00E+00	3.48E+02	5.59E+01	5.64E-01	0.00E+00	5.64E+01	4.04E+02
Municipal Landfills	3.89E+02	15.25	2.67E+01	2.43E+02	0.00E+00	2.70E+02	5.45E+00	4.96E+01	0.00E+00	5.51E+01	3.25E+02
Agricultural Chemicals and Pesticides	2.49E+02	9.75	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E+02	0.00E+00	0.00E+00	2.49E+02	2.49E+02
Acrylic Fibers/Modacrylic Fibers Production	1.50E+02	5.87	5.52E+01	1.84E+01	0.00E+00	7.36E+01	5.71E+01	1.90E+01	0.00E+00	7.61E+01	1.50E+02
Industrial Organic Chemicals Manufacturing	1.06E+02	4.16	8.77E+01	2.09E+00	0.00E+00	8.98E+01	1.48E+01	8.38E-01	0.00E+00	1.56E+01	1.05E+02
Nitrogenous Fertilizers	4.90E+01	1.92	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.90E+01	0.00E+00	0.00E+00	4.90E+01	4.90E+01
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	4.64E+01	1.82	4.41E+01	1.52E+00	0.00E+00	4.57E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.57E+01
Publicly Owned Treatment Works (POTW) Emissions	2.56E+01	1.00	7.05E-01	1.71E+01	0.00E+00	1.78E+01	1.44E-01	3.48E+00	0.00E+00	3.63E+00	2.14E+01
Industrial Inorganic Chemical Manufacturing	2.54E+01	1.00	2.36E+01	2.50E-03	0.00E+00	2.36E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E+01
Tire Production	1.71E+01	0.67	5.79E+00	5.85E-02	0.00E+00	5.85E+00	6.85E+00	6.92E-02	0.00E+00	6.92E+00	1.28E+01
Sewage Sludge Incineration	9.94E+00	0.39	0.00E+00	8.19E+00	0.00E+00	8.19E+00	0.00E+00	1.31E+00	0.00E+00	1.31E+00	9.50E+00
Boat Manufacturing	5.00E+00	0.20	5.00E+00	0.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E+00
Industrial Gases Manufacturing	3.19E+00	0.12	3.19E+00	0.00E+00	0.00E+00	3.19E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E+00
Surface Active Agents Manufacturing	2.40E+00	0.09	2.27E+00	1.25E-01	0.00E+00	2.40E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E+00
Plastics Foam Products Manufacturing (not subject to Plastic Parts (Surface Coating) MACT)	1.87E+00	0.07	1.87E+00	0.00E+00	0.00E+00	1.87E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E+00
Paints and Allied Products Manufacturing	1.74E+00	0.07	6.15E-01	3.78E-01	0.00E+00	9.93E-01	7.50E-01	0.00E+00	0.00E+00	7.50E-01	1.74E+00

Table 6 - 10 Base Year 1990 National Emission Estimates for Acrylonitrile

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Photographic Equipment And Supplies	1.69E+00	0.07	1.69E+00	0.00E+00	0.00E+00	1.69E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E+00
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	6.74E-01	0.03	6.74E-01	0.00E+00	0.00E+00	6.74E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.74E-01
Secondary Lead Smelting	6.26E-01	0.02	4.34E-01	3.77E-02	0.00E+00	4.71E-01	8.85E-03	7.69E-04	0.00E+00	9.62E-03	4.81E-01
Pharmaceuticals Production	6.20E-01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chemical Preparations	4.11E-01	0.02	3.78E-01	3.30E-02	0.00E+00	4.10E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-01
Industrial Organic Chemicals	4.05E-01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Reinforced Plastic Composites Production	2.53E-01	0.01	1.40E-01	2.11E-02	0.00E+00	1.61E-01	5.66E-02	8.53E-03	0.00E+00	6.51E-02	2.26E-01
Fabricated Rubber Products, nec	2.50E-01	0.01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Shipbuilding and Ship Repair (Surface Coating)	1.28E-01	< 0.01	9.54E-02	1.95E-03	0.00E+00	9.73E-02	1.85E-02	3.78E-04	0.00E+00	1.89E-02	1.16E-01
Metal Barrels, Drums, and Pails Manufacturing	1.25E-01	< 0.01	1.25E-01	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Unsupported Plastics Film & Sheet	1.25E-01	< 0.01	1.25E-01	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Clay Products Manufacturing	1.10E-02	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cement, Hydraulic (not subject to Portland Cement MACT)	3.50E-03	< 0.01	0.00E+00	3.50E-03	0.00E+00	3.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-03

**Table 6 - 11 Base Year 1990 National Emission Estimates for
Arsenic Compounds**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Primary Copper Smelting	7.65E+01	26.92	9.30E+00	3.44E+00	0.00E+00	1.27E+01	3.12E+01	1.15E+01	0.00E+00	4.28E+01	5.55E+01
Utility Boilers - Coal	5.40E+01	18.99	2.08E+01	0.00E+00	0.00E+00	2.08E+01	1.36E+01	0.00E+00	0.00E+00	1.36E+01	3.45E+01
Petroleum Refineries: Catalytic Cracking (Fluid and other) Units, Catalytic Reforming Units, and Sulfur Plant Units	4.25E+01	14.95	2.58E+01	0.00E+00	0.00E+00	2.58E+01	1.06E+01	0.00E+00	0.00E+00	1.06E+01	3.64E+01
Primary Lead Smelting	2.08E+01	7.31	1.38E+01	0.00E+00	0.00E+00	1.38E+01	6.91E+00	0.00E+00	0.00E+00	6.91E+00	2.07E+01
Pulp and Paper Production (combustion) MACT II	1.40E+01	4.93	2.59E+00	0.00E+00	0.00E+00	2.59E+00	4.80E+00	0.00E+00	0.00E+00	4.80E+00	7.39E+00
Food and Agricultural Products: Cotton Ginning	1.29E+01	4.55	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Industrial Boilers	1.28E+01	4.51	7.13E+00	1.26E+00	0.00E+00	8.39E+00	1.66E+00	2.98E-01	0.00E+00	1.96E+00	1.03E+01
Pressed and Blown Glass and Glassware Manufacturing	9.48E+00	3.34	0.00E+00	7.49E-01	0.00E+00	7.49E-01	0.00E+00	6.31E-01	0.00E+00	6.31E-01	1.38E+00
Hazardous Waste Incineration	5.77E+00	2.03	3.04E+00	0.00E+00	0.00E+00	3.04E+00	1.16E+00	0.00E+00	0.00E+00	1.16E+00	4.20E+00
Secondary Lead Smelting	5.53E+00	1.94	3.83E+00	3.33E-01	0.00E+00	4.16E+00	7.82E-02	6.80E-03	0.00E+00	8.50E-02	4.25E+00
Utility Boilers - Oil	5.00E+00	1.76	2.88E+00	1.24E+00	0.00E+00	4.12E+00	4.80E-01	2.06E-01	0.00E+00	6.86E-01	4.80E+00
Institutional/Commercial Heating	3.70E+00	1.30	0.00E+00	2.88E+00	0.00E+00	2.88E+00	0.00E+00	4.82E-01	0.00E+00	4.82E-01	3.37E+00
Wood Preserving	3.43E+00	1.21	0.00E+00	1.24E+00	0.00E+00	1.24E+00	0.00E+00	3.53E-01	0.00E+00	3.53E-01	1.60E+00
Primary Nonferrous Metals Production	2.02E+00	0.71	2.00E+00	3.50E-03	0.00E+00	2.01E+00	0.00E+00	1.05E-02	0.00E+00	1.05E-02	2.02E+00
Agricultural Chemicals and Pesticides	1.93E+00	0.68	0.00E+00	1.39E+00	0.00E+00	1.39E+00	0.00E+00	2.87E-01	0.00E+00	2.87E-01	1.68E+00
Mobile Sources: On- Road Vehicles	1.76E+00	0.62	0.00E+00	0.00E+00	8.71E-01	8.71E-01	0.00E+00	0.00E+00	2.98E-01	2.98E-01	1.17E+00
Residential Heating: Distillate Oil Combustion	1.69E+00	0.59	0.00E+00	1.17E+00	0.00E+00	1.17E+00	0.00E+00	2.39E-01	0.00E+00	2.39E-01	1.41E+00

**Table 6 - 11 Base Year 1990 National Emission Estimates for
Arsenic Compounds**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Residential Heating: Wood/Wood Residue Combustion	1.44E+00	0.51	0.00E+00	9.94E-01	0.00E+00	9.94E-01	0.00E+00	2.16E-01	0.00E+00	2.16E-01	1.21E+00
Prepared Feeds Manufacturing	1.43E+00	0.50	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.25E-01
Municipal Waste Combustors	1.39E+00	0.49	8.87E-01	4.67E-02	0.00E+00	9.33E-01	2.49E-01	1.31E-02	0.00E+00	2.62E-01	1.20E+00
Industrial Inorganic Chemical Manufacturing	1.19E+00	0.42	0.00E+00	9.40E-01	0.00E+00	9.40E-01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	1.19E+00
Mobile Sources: Non-Road Vehicles and Equipment - Commercial Marine Vessels	1.04E+00	0.37	0.00E+00	0.00E+00	1.04E+00	1.04E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E+00
Secondary Nonferrous Metals Production	9.66E-01	0.34	1.25E-02	2.68E-01	0.00E+00	2.81E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-01
Sewage Sludge Incineration	3.96E-01	0.14	0.00E+00	3.27E-01	0.00E+00	3.27E-01	0.00E+00	5.23E-02	0.00E+00	5.23E-02	3.79E-01
Residential Heating: Bituminous and Lignite Coal Combustion	3.96E-01	0.14	0.00E+00	2.75E-01	0.00E+00	2.75E-01	0.00E+00	5.61E-02	0.00E+00	5.61E-02	3.31E-01
Clay Products Manufacturing	2.65E-01	0.09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Blast Furnaces and Steel Mills	2.50E-01	0.09	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Primary Copper (not subject to Primary Copper Smelting MACT)	2.50E-01	0.09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01	0.00E+00	2.50E-01	2.50E-01
Primary Smelting and Refining of Zinc	2.50E-01	0.09	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Medical Waste Incinerators	2.10E-01	0.07	1.47E-02	8.31E-02	0.00E+00	9.78E-02	7.21E-03	4.08E-02	0.00E+00	4.80E-02	1.46E-01
Stationary Internal Combustion Engines	2.00E-01	0.07	8.04E-02	5.36E-02	0.00E+00	1.34E-01	1.80E-02	1.20E-02	0.00E+00	3.00E-02	1.64E-01
Utility Boilers - Coke	1.90E-01	0.07	1.42E-01	0.00E+00	0.00E+00	1.42E-01	2.71E-02	0.00E+00	0.00E+00	2.71E-02	1.70E-01
Residential Heating: Anthracite Coal Combustion	1.50E-01	0.05	0.00E+00	1.04E-01	0.00E+00	1.04E-01	0.00E+00	2.12E-02	0.00E+00	2.12E-02	1.25E-01
Pharmaceuticals Production	1.26E-01	0.04	0.00E+00	5.00E-04	0.00E+00	5.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-04

**Table 6 - 11 Base Year 1990 National Emission Estimates for
Arsenic Compounds**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Cold Finishing of Steel Shapes	1.25E-01	0.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Storage Batteries Manufacturing	2.25E-02	0.01	5.00E-03	1.25E-02	0.00E+00	1.75E-02	0.00E+00	5.00E-03	0.00E+00	5.00E-03	2.25E-02
Wool Fiberglass Manufacturing	2.20E-02	0.01	1.20E-02	1.21E-04	0.00E+00	1.21E-02	8.26E-03	8.34E-05	0.00E+00	8.34E-03	2.05E-02
Plywood/Particle Board Manufacturing	1.75E-02	0.01	1.36E-03	3.50E-05	0.00E+00	1.40E-03	5.47E-03	1.40E-04	0.00E+00	5.61E-03	7.01E-03
Animal Cremation	1.60E-02	0.01	0.00E+00	9.28E-03	0.00E+00	9.28E-03	0.00E+00	2.56E-03	0.00E+00	2.56E-03	1.18E-02
Mineral Wool Production	1.00E-02	< 0.01	4.67E-03	0.00E+00	0.00E+00	4.67E-03	2.67E-03	0.00E+00	0.00E+00	2.67E-03	7.33E-03
Open Burning: Scrap Tires	9.37E-03	< 0.01	0.00E+00	6.37E-03	0.00E+00	6.37E-03	0.00E+00	1.50E-03	0.00E+00	1.50E-03	7.88E-03
Plastic Parts and Products (Surface Coating)	7.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	2.50E-03	2.50E-03
Human Cremation	5.50E-03	< 0.01	0.00E+00	3.82E-03	0.00E+00	3.82E-03	0.00E+00	7.79E-04	0.00E+00	7.79E-04	4.59E-03
Custom Compound Purchased Resins Manufacturing	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Lead Pencils, Art Goods Manufacturing	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Nonferrous Wire Drawing and Insulating	5.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03	0.00E+00	0.00E+00	5.00E-03	5.00E-03
Printing/Publishing (Surface Coating)	5.00E-03	< 0.01	5.00E-03	0.00E+00	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Hydrochloric Acid Production	4.00E-03	< 0.01	2.21E-03	3.36E-05	0.00E+00	2.24E-03	1.32E-04	2.01E-06	0.00E+00	1.34E-04	2.38E-03
MON	4.00E-03	< 0.01	2.90E-03	2.93E-05	0.00E+00	2.93E-03	4.70E-04	4.75E-06	0.00E+00	4.75E-04	3.41E-03
Small Arms Ammunition	4.00E-03	< 0.01	4.00E-03	0.00E+00	0.00E+00	4.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-03
Iron Foundries	3.50E-03	< 0.01	3.50E-03	0.00E+00	0.00E+00	3.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-03

**Table 6 - 11 Base Year 1990 National Emission Estimates for
Arsenic Compounds**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Aerospace Industries	2.60E-03	< 0.01	2.30E-03	9.57E-05	0.00E+00	2.39E-03	1.25E-04	5.20E-06	0.00E+00	1.30E-04	2.52E-03
Plating And Polishing	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	2.50E-03
Sawmills and Planing Mills, general	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Petroleum Refining (not subject to Petroleum Refining MACT)	1.50E-03	< 0.01	1.50E-03	0.00E+00	0.00E+00	1.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-03
Industrial Organic Chemicals Manufacturing	1.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-03	0.00E+00	1.00E-03	1.00E-03

Table 6 - 12 Base Year 1990 National Emission Estimates for Benzene

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Mobile Sources: On-Road Vehicles	2.09E+05	53.43	0.00E+00	0.00E+00	1.03E+05	1.03E+05	0.00E+00	0.00E+00	3.54E+04	3.54E+04	1.39E+05
Mobile Sources: Non-Road Vehicles and Equipment - Other	7.14E+04	18.27	0.00E+00	0.00E+00	4.95E+04	4.95E+04	0.00E+00	0.00E+00	1.01E+04	1.01E+04	5.96E+04
Open Burning: Forest and Wildfires	2.99E+04	7.66	0.00E+00	1.80E+03	0.00E+00	1.80E+03	0.00E+00	4.49E+03	0.00E+00	4.49E+03	6.29E+03
Open Burning: Prescribed Burnings	2.57E+04	6.57	0.00E+00	3.85E+03	0.00E+00	3.85E+03	0.00E+00	5.65E+03	0.00E+00	5.65E+03	9.50E+03
Oil and Natural Gas Production	1.82E+04	4.66	2.33E+03	1.25E+03	0.00E+00	3.59E+03	5.38E+03	2.90E+03	0.00E+00	8.28E+03	1.19E+04
Petroleum Refineries: Other Sources Not Distinctly Listed	6.28E+03	1.61	3.75E+03	7.66E+01	0.00E+00	3.83E+03	1.61E+03	3.29E+01	0.00E+00	1.65E+03	5.48E+03
Gasoline Distribution Stage II	5.58E+03	1.43	3.83E+02	3.49E+03	0.00E+00	3.87E+03	7.82E+01	7.12E+02	0.00E+00	7.90E+02	4.66E+03
Gasoline Distribution (Stage 1)	5.18E+03	1.33	1.06E+02	2.02E+03	0.00E+00	2.13E+03	5.96E+01	1.13E+03	0.00E+00	1.19E+03	3.32E+03
Coke Ovens: Emergency Releases	4.25E+03	1.09	3.19E+03	0.00E+00	0.00E+00	3.19E+03	6.07E+02	0.00E+00	0.00E+00	6.07E+02	3.79E+03
MON	2.05E+03	0.53	1.49E+03	1.50E+01	0.00E+00	1.50E+03	2.41E+02	2.44E+00	0.00E+00	2.44E+02	1.75E+03
Industrial Organic Chemicals Manufacturing	1.91E+03	0.49	1.34E+03	3.24E+01	0.00E+00	1.37E+03	3.10E+02	7.01E+00	0.00E+00	3.17E+02	1.68E+03
Pulp and Paper Production (combustion) MACT II	1.57E+03	0.40	2.91E+02	0.00E+00	0.00E+00	2.91E+02	5.39E+02	0.00E+00	0.00E+00	5.39E+02	8.30E+02
Petroleum Refining (not subject to Petroleum Refining MACT)	1.55E+03	0.40	1.17E+03	3.13E+01	0.00E+00	1.20E+03	2.06E+02	1.47E+01	0.00E+00	2.20E+02	1.42E+03
Mobile Sources: Non-Road Vehicles and Equipment - Aircraft	1.08E+03	0.28	0.00E+00	0.00E+00	9.29E+02	9.29E+02	0.00E+00	0.00E+00	1.14E+02	1.14E+02	1.04E+03
Stationary Internal Combustion Engines	1.00E+03	0.26	4.04E+02	2.69E+02	0.00E+00	6.73E+02	9.04E+01	6.02E+01	0.00E+00	1.51E+02	8.23E+02
Integrated Iron and Steel Manufacturing	8.88E+02	0.23	8.01E+02	0.00E+00	0.00E+00	8.01E+02	8.76E+01	0.00E+00	0.00E+00	8.76E+01	8.88E+02
Coke By-Product Plants	7.21E+02	0.18	5.41E+02	0.00E+00	0.00E+00	5.41E+02	1.03E+02	0.00E+00	0.00E+00	1.03E+02	6.44E+02

Table 6 - 12 Base Year 1990 National Emission Estimates for Benzene

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Marine Vessel Loading Operations	6.51E+02	0.17	5.60E+02	0.00E+00	0.00E+00	5.60E+02	7.16E+01	0.00E+00	0.00E+00	7.16E+01	6.31E+02
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	5.40E+02	0.14	2.40E+02	1.76E+01	0.00E+00	2.58E+02	2.15E+02	0.00E+00	0.00E+00	2.15E+02	4.73E+02
Polymers & Resins (I, II, and IV)	5.13E+02	0.13	3.95E+02	3.11E+00	0.00E+00	3.98E+02	4.23E+01	6.34E+00	0.00E+00	4.86E+01	4.46E+02
Publicly Owned Treatment Works (POTW) Emissions	4.47E+02	0.11	1.23E+01	2.98E+02	0.00E+00	3.10E+02	2.52E+00	6.08E+01	0.00E+00	6.34E+01	3.74E+02
Coke Ovens: Charging, Top Side, and Door Leaks	3.96E+02	0.10	2.97E+02	0.00E+00	0.00E+00	2.97E+02	5.65E+01	0.00E+00	0.00E+00	5.65E+01	3.53E+02
Natural Gas Transmissions and Storage	3.45E+02	0.09	5.66E+01	2.26E+02	0.00E+00	2.83E+02	1.24E+01	4.97E+01	0.00E+00	6.21E+01	3.45E+02
Blast Furnaces and Steel Mills	3.08E+02	0.08	3.08E+02	0.00E+00	0.00E+00	3.08E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.08E+02
Coke Ovens: Pushing, Quenching, and Battery Stacks	2.90E+02	0.07	2.18E+02	0.00E+00	0.00E+00	2.18E+02	4.14E+01	0.00E+00	0.00E+00	4.14E+01	2.59E+02
Aerospace Industries	2.14E+02	0.05	1.83E+02	8.26E+00	0.00E+00	1.92E+02	1.57E+01	4.06E-01	0.00E+00	1.61E+01	2.08E+02
Secondary Lead Smelting	1.78E+02	0.05	1.23E+02	1.07E+01	0.00E+00	1.34E+02	2.52E+00	2.19E-01	0.00E+00	2.73E+00	1.37E+02
Municipal Landfills	1.73E+02	0.04	1.19E+01	1.08E+02	0.00E+00	1.20E+02	2.42E+00	2.21E+01	0.00E+00	2.45E+01	1.44E+02
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	1.51E+02	0.04	5.70E+01	0.00E+00	0.00E+00	5.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.70E+01
Hydrochloric Acid Production	1.19E+02	0.03	6.58E+01	1.00E+00	0.00E+00	6.68E+01	3.94E+00	6.00E-02	0.00E+00	4.00E+00	7.08E+01
Pulp and Paper Production (non-combustion) MACT I	6.20E+01	0.02	1.16E+01	0.00E+00	0.00E+00	1.16E+01	2.12E+01	0.00E+00	0.00E+00	2.12E+01	3.28E+01
Carbon Black (not subject to MACT)	3.59E+01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Plastic Parts and Products (Surface Coating)	3.40E+01	0.01	3.10E+01	1.80E-02	0.00E+00	3.10E+01	2.85E+00	0.00E+00	0.00E+00	2.85E+00	3.39E+01
Industrial Boilers	2.74E+01	0.01	1.62E+01	2.17E+00	0.00E+00	1.84E+01	3.62E+00	4.86E-01	0.00E+00	4.11E+00	2.25E+01

Table 6 - 12 Base Year 1990 National Emission Estimates for Benzene

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Utility Boilers - Coal	2.10E+01	0.01	8.10E+00	0.00E+00	0.00E+00	8.10E+00	5.30E+00	0.00E+00	0.00E+00	5.30E+00	1.34E+01
Meat Packing Plants	2.02E+01	0.01	2.02E+01	0.00E+00	0.00E+00	2.02E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.02E+01
Petroleum Bulk Stations and Terminals (not subject to Petroleum Refining MACT)	1.66E+01	< 0.01	1.50E+01	1.69E+00	0.00E+00	1.66E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E+01
Clay Products Manufacturing	1.48E+01	< 0.01	0.00E+00	2.80E-02	0.00E+00	2.80E-02	2.50E-01	0.00E+00	0.00E+00	2.50E-01	2.78E-01
Petroleum Refineries: Catalytic Cracking (Fluid and other) Units, Catalytic Reforming Units, and Sulfur Plant Units	1.13E+01	< 0.01	6.86E+00	0.00E+00	0.00E+00	6.86E+00	2.83E+00	0.00E+00	0.00E+00	2.83E+00	9.68E+00
Paints and Allied Products Manufacturing	9.50E+00	< 0.01	0.00E+00	9.50E+00	0.00E+00	9.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.50E+00
Chemicals and Allied Products Manufacturing	8.50E+00	< 0.01	2.84E+00	0.00E+00	0.00E+00	2.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E+00
Boat Manufacturing	8.13E+00	< 0.01	8.13E+00	0.00E+00	0.00E+00	8.13E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.13E+00
Stationary Combustion Turbines	7.65E+00	< 0.01	2.56E+00	2.56E+00	0.00E+00	5.13E+00	5.74E-01	5.74E-01	0.00E+00	1.15E+00	6.27E+00
Agricultural Chemicals and Pesticides	7.29E+00	< 0.01	6.90E+00	3.87E-01	0.00E+00	7.29E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.29E+00
Highway And Street Construction	7.13E+00	< 0.01	0.00E+00	7.13E+00	0.00E+00	7.13E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.13E+00
Chemical Preparations	6.99E+00	< 0.01	0.00E+00	7.50E-01	0.00E+00	7.50E-01	6.24E+00	0.00E+00	0.00E+00	6.24E+00	6.99E+00
Institutional/Commercial Heating	6.15E+00	< 0.01	0.00E+00	4.79E+00	0.00E+00	4.79E+00	0.00E+00	8.00E-01	0.00E+00	8.00E-01	5.59E+00
Paper and Other Webs (Surface Coating)	5.51E+00	< 0.01	5.51E+00	0.00E+00	0.00E+00	5.51E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.51E+00
Paper Coating and Glazing Manufacturing	5.50E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.50E+00	0.00E+00	0.00E+00	5.50E+00	5.50E+00
Tire Production	4.95E+00	< 0.01	1.68E+00	1.70E-02	0.00E+00	1.70E+00	1.99E+00	2.01E-02	0.00E+00	2.01E+00	3.70E+00
Lubricating Oils and Greases	4.74E+00	< 0.01	4.56E+00	1.82E-01	0.00E+00	4.74E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.74E+00

Table 6 - 12 Base Year 1990 National Emission Estimates for Benzene

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Sewage Sludge Incineration	4.69E+00	< 0.01	0.00E+00	3.87E+00	0.00E+00	3.87E+00	0.00E+00	6.19E-01	0.00E+00	6.19E-01	4.49E+00
Residential Heating: Natural Gas Combustion	4.52E+00	< 0.01	0.00E+00	3.14E+00	0.00E+00	3.14E+00	0.00E+00	6.40E-01	0.00E+00	6.40E-01	3.78E+00
Industrial Inorganic Chemical Manufacturing	4.14E+00	< 0.01	2.20E-01	2.40E+00	0.00E+00	2.62E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	2.74E+00
Manufacturing Industries, nec	2.05E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E+00	0.00E+00	1.62E+00	1.62E+00
Internal Combustion Engine Manufacturing	1.96E+00	< 0.01	1.96E+00	0.00E+00	0.00E+00	1.96E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E+00
Utility Boilers - Natural Gas	1.80E+00	< 0.01	0.00E+00	1.02E+00	0.00E+00	1.02E+00	0.00E+00	4.92E-01	0.00E+00	4.92E-01	1.51E+00
Wood Preserving	1.38E+00	< 0.01	0.00E+00	1.38E+00	0.00E+00	1.38E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E+00
Residential Heating: Bituminous and Lignite Coal Combustion	1.25E+00	< 0.01	0.00E+00	8.67E-01	0.00E+00	8.67E-01	0.00E+00	1.77E-01	0.00E+00	1.77E-01	1.04E+00
Engine Electric Equipment	1.21E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Utility Boilers - Oil	8.80E-01	< 0.01	5.07E-01	2.17E-01	0.00E+00	7.25E-01	8.45E-02	3.62E-02	0.00E+00	1.21E-01	8.45E-01
Pharmaceuticals Production	8.50E-01	< 0.01	7.01E-01	2.17E-02	0.00E+00	7.23E-01	6.60E-02	2.04E-03	0.00E+00	6.80E-02	7.91E-01
Uranium Hexafluoride Production	7.76E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Concrete Manufacturing	7.60E-01	< 0.01	0.00E+00	7.60E-01	0.00E+00	7.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.60E-01
Residential Heating: Distillate Oil Combustion	6.34E-01	< 0.01	0.00E+00	4.40E-01	0.00E+00	4.40E-01	0.00E+00	8.98E-02	0.00E+00	8.98E-02	5.30E-01
Utility Boilers - Coke	6.04E-01	< 0.01	4.53E-01	0.00E+00	0.00E+00	4.53E-01	8.63E-02	0.00E+00	0.00E+00	8.63E-02	5.39E-01
Consumer Products Usage	5.87E-01	< 0.01	0.00E+00	4.07E-01	0.00E+00	4.07E-01	0.00E+00	8.31E-02	0.00E+00	8.31E-02	4.90E-01
Residential Heating: Anthracite Coal Combustion	4.76E-01	< 0.01	0.00E+00	3.30E-01	0.00E+00	3.30E-01	0.00E+00	6.74E-02	0.00E+00	6.74E-02	3.98E-01

Table 6 - 12 Base Year 1990 National Emission Estimates for Benzene

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Motor Vehicle Equipment	3.51E-01	< 0.01	3.35E-01	1.55E-02	0.00E+00	3.51E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.51E-01
Asphalt Roofing Manufacturing	3.42E-01	< 0.01	0.00E+00	3.42E-01	0.00E+00	3.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.42E-01
Commercial Physical Research	2.68E-01	< 0.01	0.00E+00	2.68E-01	0.00E+00	2.68E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-01
Metal Furniture (Surface Coating)	2.50E-01	< 0.01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Mobile Sources: Non-Road Vehicles and Equipment - Commercial Marine Vessels	1.70E-01	< 0.01	0.00E+00	0.00E+00	1.70E-01	1.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-01
Cement, Hydraulic (not subject to Portland Cement MACT)	1.47E-01	< 0.01	0.00E+00	7.85E-02	0.00E+00	7.85E-02	0.00E+00	2.50E-03	0.00E+00	2.50E-03	8.10E-02
Hand and Edge Tools Manufacturing	1.35E-01	< 0.01	0.00E+00	1.35E-01	0.00E+00	1.35E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-01
Cold Finishing of Steel Shapes	1.25E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Large Appliance (Surface Coating)	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Potato Chips and Similar Snacks	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Space Research and Technology	1.25E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.25E-01
Distilled and Blended Liquors Production	4.80E-02	< 0.01	4.30E-02	0.00E+00	0.00E+00	4.30E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.30E-02
Chemicals and Allied Products, nec	2.60E-02	< 0.01	0.00E+00	2.60E-02	0.00E+00	2.60E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.60E-02
Carburetors, Pistons, Rings and Valves Manufacturing	6.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.50E-03	0.00E+00	6.50E-03	6.50E-03
Taconite Iron Ore Processing	4.80E-03	< 0.01	2.40E-04	2.93E-04	0.00E+00	5.33E-04	1.68E-03	2.05E-03	0.00E+00	3.73E-03	4.27E-03
Condensed and Evaporated milk	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	2.50E-03
Iron Foundries	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	2.50E-03

Table 6 - 12 Base Year 1990 National Emission Estimates for Benzene

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	
Nonmetallic Mineral Products Manufacturing	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03

**Table 6 - 13 Base Year 1990 National Emission Estimates for
Beryllium Compounds**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Utility Boilers - Coal	6.60E+00	54.31	2.55E+00	0.00E+00	0.00E+00	2.55E+00	1.67E+00	0.00E+00	0.00E+00	1.67E+00	4.21E+00
Residential Heating: Distillate Oil Combustion	1.27E+00	10.45	0.00E+00	8.81E-01	0.00E+00	8.81E-01	0.00E+00	1.80E-01	0.00E+00	1.80E-01	1.06E+00
Institutional/Commercial Heating	8.11E-01	6.68	0.00E+00	6.33E-01	0.00E+00	6.33E-01	0.00E+00	1.05E-01	0.00E+00	1.05E-01	7.38E-01
Industrial Boilers	6.15E-01	5.06	3.42E-01	6.98E-02	0.00E+00	4.12E-01	7.66E-02	1.56E-02	0.00E+00	9.22E-02	5.04E-01
Pulp and Paper Production (combustion) MACT II	6.00E-01	4.94	1.11E-01	0.00E+00	0.00E+00	1.11E-01	2.05E-01	0.00E+00	0.00E+00	2.05E-01	3.16E-01
Primary Nonferrous Metals Production	5.52E-01	4.55	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Utility Boilers - Oil	4.50E-01	3.70	2.59E-01	1.11E-01	0.00E+00	3.71E-01	4.32E-02	1.85E-02	0.00E+00	6.18E-02	4.32E-01
Primary Copper Smelting	3.50E-01	2.88	4.25E-02	1.57E-02	0.00E+00	5.83E-02	1.43E-01	5.28E-02	0.00E+00	1.96E-01	2.54E-01
Petroleum Refineries: Catalytic Cracking (Fluid and other) Units, Catalytic Reforming Units, and Sulfur Plant Units	2.50E-01	2.06	1.52E-01	0.00E+00	0.00E+00	1.52E-01	6.25E-02	0.00E+00	0.00E+00	6.25E-02	2.14E-01
Hazardous Waste Incineration	1.80E-01	1.48	9.48E-02	0.00E+00	0.00E+00	9.48E-02	3.62E-02	0.00E+00	0.00E+00	3.62E-02	1.31E-01
Stationary Internal Combustion Engines	1.50E-01	1.23	6.03E-02	4.02E-02	0.00E+00	1.00E-01	1.35E-02	9.00E-03	0.00E+00	2.25E-02	1.23E-01
Aluminum Foundries (Castings)	1.28E-01	1.05	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.28E-01
Copper Rolling and Drawing	1.06E-01	0.87	1.06E-01	0.00E+00	0.00E+00	1.06E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-01
Residential Heating: Bituminous and Lignite Coal Combustion	2.03E-02	0.17	0.00E+00	1.41E-02	0.00E+00	1.41E-02	0.00E+00	2.87E-03	0.00E+00	2.87E-03	1.70E-02
Mobile Sources: Non-Road Vehicles and Equipment - Commercial Marine Vessels	2.00E-02	0.16	0.00E+00	0.00E+00	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02
Clay Products Manufacturing	1.40E-02	0.12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Utility Boilers - Coke	9.75E-03	0.08	7.31E-03	0.00E+00	0.00E+00	7.31E-03	1.39E-03	0.00E+00	0.00E+00	1.39E-03	8.71E-03

**Table 6 - 13 Base Year 1990 National Emission Estimates for
Beryllium Compounds**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	
Residential Heating: Anthracite Coal Combustion	7.69E-03	0.06	0.00E+00	5.34E-03	0.00E+00	5.34E-03	0.00E+00	1.09E-03	0.00E+00	1.09E-03	6.42E-03
Sewage Sludge Incineration	7.55E-03	0.06	0.00E+00	6.22E-03	0.00E+00	6.22E-03	0.00E+00	9.96E-04	0.00E+00	9.96E-04	7.22E-03
Cold Finishing of Steel Shapes	2.50E-03	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Large Appliance (Surface Coating)	2.50E-03	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	2.50E-03	2.50E-03
Stainless and Non-stainless Steel Manufacture - EAF	2.00E-03	0.02	1.34E-03	1.15E-04	0.00E+00	1.46E-03	3.73E-04	4.44E-05	0.00E+00	4.17E-04	1.87E-03
Mineral Wool Production	1.00E-03	0.01	4.67E-04	0.00E+00	0.00E+00	4.67E-04	2.67E-04	0.00E+00	0.00E+00	2.67E-04	7.33E-04
Animal Cremation	7.36E-04	0.01	0.00E+00	4.27E-04	0.00E+00	4.27E-04	0.00E+00	1.18E-04	0.00E+00	1.18E-04	5.45E-04
Electronic Components, nec	5.00E-04	< 0.01	0.00E+00	5.00E-04	0.00E+00	5.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-04
MON	5.00E-04	< 0.01	3.63E-04	3.66E-06	0.00E+00	3.66E-04	5.88E-05	5.94E-07	0.00E+00	5.94E-05	4.26E-04
Human Cremation	2.53E-04	< 0.01	0.00E+00	1.76E-04	0.00E+00	1.76E-04	0.00E+00	3.58E-05	0.00E+00	3.58E-05	2.11E-04

**Table 6 - 14 Base Year 1990 National Emission Estimates for
bis(2-Ethylhexyl)phthalate**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Motor Vehicle Equipment	1.66E+02	20.61	1.66E+02	0.00E+00	0.00E+00	1.66E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E+02
Plastic Parts and Products (Surface Coating)	1.48E+02	18.31	1.35E+02	5.10E+00	0.00E+00	1.40E+02	1.25E-01	2.80E+00	0.00E+00	2.93E+00	1.43E+02
Wood Furniture (Surface Coating)	1.35E+02	16.72	2.27E+01	2.50E-01	0.00E+00	2.30E+01	1.45E+01	0.00E+00	0.00E+00	1.45E+01	3.75E+01
Unsupported Plastics Film & Sheet	5.61E+01	6.96	0.00E+00	1.94E+00	0.00E+00	1.94E+00	1.29E+01	0.00E+00	0.00E+00	1.29E+01	1.48E+01
Printing/Publishing (Surface Coating)	3.91E+01	4.85	3.53E+01	2.05E+00	0.00E+00	3.73E+01	0.00E+00	1.75E+00	0.00E+00	1.75E+00	3.91E+01
Utility Boilers - Coal	3.50E+01	4.34	1.35E+01	0.00E+00	0.00E+00	1.35E+01	8.83E+00	0.00E+00	0.00E+00	8.83E+00	2.23E+01
Secondary Lead Smelting	3.49E+01	4.33	2.42E+01	2.10E+00	0.00E+00	2.63E+01	4.93E-01	4.29E-02	0.00E+00	5.36E-01	2.68E+01
Commercial Printing, Lithographic	2.50E+01	3.11	2.50E+01	0.00E+00	0.00E+00	2.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E+01
Fabricated Metal Products, nec	2.39E+01	2.97	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Miscellaneous Plastics Products	1.65E+01	2.05	0.00E+00	2.73E+00	0.00E+00	2.73E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.73E+00
Friction Products Manufacturing	1.32E+01	1.64	9.32E+00	4.90E-01	0.00E+00	9.81E+00	1.26E+00	6.64E-02	0.00E+00	1.33E+00	1.11E+01
Polymers & Resins (I, II, and IV)	1.29E+01	1.61	6.64E+00	4.78E+00	0.00E+00	1.14E+01	1.28E+00	9.50E-03	0.00E+00	1.29E+00	1.27E+01
Tire Production	1.00E+01	1.24	3.40E+00	3.43E-02	0.00E+00	3.43E+00	4.02E+00	4.06E-02	0.00E+00	4.06E+00	7.50E+00
Clay Products Manufacturing	9.71E+00	1.21	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Printing, Coating, and Dyeing of Fabrics	9.47E+00	1.18	8.22E+00	1.13E+00	0.00E+00	9.35E+00	0.00E+00	1.28E-01	0.00E+00	1.28E-01	9.47E+00
Industrial Organic Chemicals Manufacturing	7.51E+00	0.93	4.79E+00	1.81E+00	0.00E+00	6.60E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.60E+00
Unsupported Plastics Profile Shapes	7.35E+00	0.91	0.00E+00	7.21E+00	0.00E+00	7.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.21E+00

**Table 6 - 14 Base Year 1990 National Emission Estimates for
bis(2-Ethylhexyl)phthalate**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Wood Products	6.39E+00	0.79	6.39E+00	0.00E+00	0.00E+00	6.39E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.39E+00
Sewage Sludge Incineration	6.27E+00	0.78	0.00E+00	5.17E+00	0.00E+00	5.17E+00	0.00E+00	8.27E-01	0.00E+00	8.27E-01	5.99E+00
Plastics Foam Products Manufacturing (not subject to Plastic Parts (Surface Coating) MACT)	6.21E+00	0.77	5.00E-01	0.00E+00	0.00E+00	5.00E-01	5.68E+00	0.00E+00	0.00E+00	5.68E+00	6.18E+00
Upholstered Household Furniture	5.92E+00	0.73	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Paints and Allied Products Manufacturing	5.79E+00	0.72	9.95E-01	4.17E+00	0.00E+00	5.17E+00	2.50E-01	0.00E+00	0.00E+00	2.50E-01	5.42E+00
Pharmaceuticals Production	4.73E+00	0.59	0.00E+00	1.85E-02	0.00E+00	1.85E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-02
Metal Can (Surface Coating)	4.44E+00	0.55	0.00E+00	1.73E+00	0.00E+00	1.73E+00	2.72E+00	0.00E+00	0.00E+00	2.72E+00	4.44E+00
Fabricated Rubber Products, nec	4.40E+00	0.55	1.25E-01	2.03E+00	0.00E+00	2.16E+00	0.00E+00	9.15E-01	0.00E+00	9.15E-01	3.07E+00
Rubber and Plastic Hose and Belting Manufacturing	4.36E+00	0.54	3.75E-01	2.15E+00	0.00E+00	2.52E+00	1.33E+00	0.00E+00	0.00E+00	1.33E+00	3.85E+00
Custom Compound Purchased Resins Manufacturing	1.59E+00	0.20	0.00E+00	1.59E+00	0.00E+00	1.59E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+00
Industrial Boilers	1.39E+00	0.17	8.41E-01	9.34E-02	0.00E+00	9.34E-01	1.88E-01	2.09E-02	0.00E+00	2.09E-01	1.14E+00
Electronic Capacitors Manufacturing	1.00E+00	0.12	1.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00
Surgical and Medical Instruments Manufacturing	6.35E-01	0.08	3.85E-01	0.00E+00	0.00E+00	3.85E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.85E-01
Adhesives and Sealants	4.42E-01	0.05	2.50E-01	1.87E-01	0.00E+00	4.37E-01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	4.42E-01
Rubber and Plastic Footwear	3.75E-01	0.05	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Electrical Industrial Apparatus, nec	2.70E-01	0.03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nonferrous Wire Drawing and Insulating	2.60E-01	0.03	0.00E+00	2.55E-01	0.00E+00	2.55E-01	5.00E-03	0.00E+00	0.00E+00	5.00E-03	2.60E-01

**Table 6 - 14 Base Year 1990 National Emission Estimates for
bis(2-Ethylhexyl)phthalate**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Agricultural Chemicals and Pesticides	2.50E-01	0.03	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
House Slippers	2.50E-01	0.03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01	0.00E+00	2.50E-01	2.50E-01
Wood Building Products (Surface Coating)	2.30E-01	0.03	2.30E-01	0.00E+00	0.00E+00	2.30E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-01
Institutional/Commercial Heating	1.49E-01	0.02	0.00E+00	1.16E-01	0.00E+00	1.16E-01	0.00E+00	1.94E-02	0.00E+00	1.94E-02	1.36E-01
Paper and Other Webs (Surface Coating)	1.46E-01	0.02	0.00E+00	2.10E-02	0.00E+00	2.10E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E-02
Fabric Dress and Work Gloves	1.28E-01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Printing Ink	1.28E-01	0.02	0.00E+00	1.28E-01	0.00E+00	1.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01
Electronic Components and Accessories	1.25E-01	0.02	1.25E-01	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Industrial Inorganic Chemical Manufacturing	1.25E-01	0.02	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Noncurrent-Carrying Wiring Devices	1.25E-01	0.02	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Rubber and Plastic Footwear Manufacturing	1.25E-01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Concrete Products	1.18E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Residential Heating: Bituminous and Lignite Coal Combustion	7.04E-02	0.01	0.00E+00	4.88E-02	0.00E+00	4.88E-02	0.00E+00	9.97E-03	0.00E+00	9.97E-03	5.88E-02
Utility Boilers - Coke	3.39E-02	< 0.01	2.54E-02	0.00E+00	0.00E+00	2.54E-02	4.84E-03	0.00E+00	0.00E+00	4.84E-03	3.03E-02
Residential Heating: Anthracite Coal Combustion	2.67E-02	< 0.01	0.00E+00	1.85E-02	0.00E+00	1.85E-02	0.00E+00	3.78E-03	0.00E+00	3.78E-03	2.23E-02
Hand and Edge Tools Manufacturing	2.35E-02	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Printing Trades Machinery Manufacturing	2.35E-02	< 0.01	2.35E-02	0.00E+00	0.00E+00	2.35E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.35E-02

**Table 6 - 14 Base Year 1990 National Emission Estimates for
bis(2-Ethylhexyl)phthalate**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Mechanical Rubber Goods Manufacturing	1.95E-02	< 0.01	0.00E+00	1.95E-02	0.00E+00	1.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-02
Commercial Printing, Letterpress, and Screen	8.00E-03	< 0.01	0.00E+00	8.00E-03	0.00E+00	8.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.00E-03
Reinforced Plastic Composites Production	7.50E-03	< 0.01	4.16E-03	6.27E-04	0.00E+00	4.78E-03	1.68E-03	2.53E-04	0.00E+00	1.93E-03	6.72E-03
Plastics Products Inc. Plastic Bottles	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Chemical Preparations	3.50E-03	< 0.01	1.00E-03	2.50E-03	0.00E+00	3.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-03
Asphalt Concrete Manufacturing	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Crowns & Closures	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	2.50E-03	2.50E-03
Gaskets, Packing and Sealing Devices Manufacturing	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nonmetallic Mineral Products Manufacturing	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Paper Coating and Glazing Manufacturing	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	2.50E-03	2.50E-03
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	2.00E-03	< 0.01	2.00E-03	0.00E+00	0.00E+00	2.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-03
Chemicals and Allied Products Manufacturing	5.00E-04	< 0.01	5.00E-04	0.00E+00	0.00E+00	5.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-04

Table 6 - 15 Base Year 1990 National Emission Estimates for Cadmium Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Secondary Lead Smelting	8.98E+01	44.16	6.22E+01	5.41E+00	0.00E+00	6.76E+01	1.27E+00	1.10E-01	0.00E+00	1.38E+00	6.90E+01
Primary Copper Smelting	1.62E+01	7.97	1.97E+00	7.29E-01	0.00E+00	2.70E+00	6.61E+00	2.45E+00	0.00E+00	9.06E+00	1.18E+01
Primary Lead Smelting	1.57E+01	7.73	1.05E+01	0.00E+00	0.00E+00	1.05E+01	5.23E+00	0.00E+00	0.00E+00	5.23E+00	1.57E+01
Hazardous Waste Incineration	1.10E+01	5.40	5.78E+00	0.00E+00	0.00E+00	5.78E+00	2.21E+00	0.00E+00	0.00E+00	2.21E+00	7.99E+00
Petroleum Refineries: Catalytic Cracking (Fluid and other) Units, Catalytic Reforming Units, and Sulfur Plant Units	6.63E+00	3.26	4.02E+00	0.00E+00	0.00E+00	4.02E+00	1.66E+00	0.00E+00	0.00E+00	1.66E+00	5.68E+00
Municipal Waste Combustors	4.94E+00	2.43	3.15E+00	1.66E-01	0.00E+00	3.32E+00	8.83E-01	4.65E-02	0.00E+00	9.30E-01	4.24E+00
Secondary Copper	4.80E+00	2.36	1.94E+00	2.38E+00	0.00E+00	4.32E+00	8.64E-02	1.06E-01	0.00E+00	1.92E-01	4.51E+00
Medical Waste Incinerators	4.76E+00	2.34	3.32E-01	1.88E+00	0.00E+00	2.21E+00	1.63E-01	9.25E-01	0.00E+00	1.09E+00	3.30E+00
Cadmium Refining and Cadmium Oxide Production	4.63E+00	2.28	1.97E+00	2.41E+00	0.00E+00	4.38E+00	1.12E-01	1.37E-01	0.00E+00	2.49E-01	4.63E+00
Industrial Inorganic Chemical Manufacturing	4.62E+00	2.27	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.37E+00	2.50E-01	0.00E+00	4.62E+00	4.62E+00
Sewage Sludge Incineration	3.77E+00	1.85	0.00E+00	3.11E+00	0.00E+00	3.11E+00	0.00E+00	4.97E-01	0.00E+00	4.97E-01	3.60E+00
Cadmium Stabilizers Production	3.67E+00	1.80	3.67E+00	0.00E+00	0.00E+00	3.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.67E+00
Pulp and Paper Production (combustion) MACT II	3.33E+00	1.64	6.16E-01	0.00E+00	0.00E+00	6.16E-01	1.14E+00	0.00E+00	0.00E+00	1.14E+00	1.76E+00
Industrial Boilers	2.40E+00	1.18	1.27E+00	2.86E-01	0.00E+00	1.56E+00	3.00E-01	6.80E-02	0.00E+00	3.68E-01	1.93E+00
Inorganic Pigments: Cadmium Pigments in Plastics	2.16E+00	1.06	1.91E+00	0.00E+00	0.00E+00	1.91E+00	2.50E-03	0.00E+00	0.00E+00	2.50E-03	1.91E+00
Primary Nonferrous Metals Production	2.02E+00	1.00	1.90E+00	1.25E-01	0.00E+00	2.02E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.02E+00
Utility Boilers - Coal	1.90E+00	0.93	7.33E-01	0.00E+00	0.00E+00	7.33E-01	4.80E-01	0.00E+00	0.00E+00	4.80E-01	1.21E+00

Table 6 - 15 Base Year 1990 National Emission Estimates for Cadmium Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Plating And Polishing	1.77E+00	0.87	1.28E-01	1.26E+00	0.00E+00	1.39E+00	0.00E+00	1.35E-01	0.00E+00	1.35E-01	1.52E+00
Inorganic Pigments Manufacturing	1.71E+00	0.84	1.46E+00	0.00E+00	0.00E+00	1.46E+00	2.50E-01	0.00E+00	0.00E+00	2.50E-01	1.71E+00
Utility Boilers - Oil	1.70E+00	0.84	9.80E-01	4.20E-01	0.00E+00	1.40E+00	1.63E-01	7.00E-02	0.00E+00	2.33E-01	1.63E+00
Secondary Zinc Production	1.65E+00	0.81	4.57E-01	5.58E-01	0.00E+00	1.02E+00	1.71E-01	2.09E-01	0.00E+00	3.81E-01	1.40E+00
Institutional/Commercial Heating	1.39E+00	0.68	0.00E+00	1.09E+00	0.00E+00	1.09E+00	0.00E+00	1.81E-01	0.00E+00	1.81E-01	1.27E+00
Residential Heating: Distillate Oil Combustion	1.27E+00	0.62	0.00E+00	8.81E-01	0.00E+00	8.81E-01	0.00E+00	1.80E-01	0.00E+00	1.80E-01	1.06E+00
Cadmium Stabilizers for Plastics	1.15E+00	0.57	8.72E-01	0.00E+00	0.00E+00	8.72E-01	6.00E-03	0.00E+00	0.00E+00	6.00E-03	8.78E-01
Stainless and Non-stainless Steel Manufacture - EAF	9.42E-01	0.46	6.31E-01	5.42E-02	0.00E+00	6.86E-01	1.75E-01	2.09E-02	0.00E+00	1.96E-01	8.82E-01
Aluminum Foundries	8.67E-01	0.43	0.00E+00	8.67E-01	0.00E+00	8.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.67E-01
Secondary Nonferrous Metals Production	7.55E-01	0.37	7.50E-01	5.50E-03	0.00E+00	7.55E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.55E-01
Metal Sanitary Ware Manufacturing	7.50E-01	0.37	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Primary Copper (not subject to Primary Copper Smelting MACT)	5.05E-01	0.25	0.00E+00	5.05E-01	0.00E+00	5.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.05E-01
Blast Furnaces and Steel Mills	3.78E-01	0.19	1.28E-01	2.50E-01	0.00E+00	3.77E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-01
Valves and Pipe Fittings Manufacturing	3.78E-01	0.19	0.00E+00	3.75E-01	0.00E+00	3.75E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-01
Industrial Organic Chemicals Manufacturing	3.76E-01	0.18	0.00E+00	3.75E-01	0.00E+00	3.75E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-01
Residential Heating: Wood/Wood Residue Combustion	3.55E-01	0.17	0.00E+00	2.45E-01	0.00E+00	2.45E-01	0.00E+00	5.32E-02	0.00E+00	5.32E-02	2.98E-01
Storage Batteries Manufacturing	3.48E-01	0.17	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	2.23E-01	0.00E+00	2.23E-01	3.48E-01

Table 6 - 15 Base Year 1990 National Emission Estimates for Cadmium Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Copper Rolling and Drawing	3.31E-01	0.16	0.00E+00	3.31E-01	0.00E+00	3.31E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.31E-01
Mobile Sources: Non-Road Vehicles and Equipment - Commercial Marine Vessels	3.10E-01	0.15	0.00E+00	0.00E+00	3.10E-01	3.10E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.10E-01
Primary Metal Products Manufacturing	2.99E-01	0.15	2.50E-01	4.90E-02	0.00E+00	2.99E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.99E-01
Nonferrous Rolling and Drawing	2.92E-01	0.14	4.20E-02	2.50E-01	0.00E+00	2.92E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.92E-01
MON	2.60E-01	0.13	1.89E-01	1.90E-03	0.00E+00	1.90E-01	3.06E-02	3.09E-04	0.00E+00	3.09E-02	2.21E-01
Aerospace Industries	2.58E-01	0.13	2.57E-01	9.57E-05	0.00E+00	2.57E-01	1.25E-04	5.20E-06	0.00E+00	1.30E-04	2.58E-01
Paints and Allied Products Manufacturing	2.56E-01	0.13	6.00E-03	0.00E+00	0.00E+00	6.00E-03	0.00E+00	2.50E-01	0.00E+00	2.50E-01	2.56E-01
Pressed and Blown Glass and Glassware Manufacturing	2.55E-01	0.13	5.00E-03	2.50E-01	0.00E+00	2.55E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-01
Engine Electric Equipment	2.53E-01	0.12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Automotive stampings	2.50E-01	0.12	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Fabricated Metal Products, nec	2.50E-01	0.12	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Lead Pencils, Art Goods Manufacturing	2.50E-01	0.12	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Stationary Internal Combustion Engines	1.50E-01	0.07	6.03E-02	4.02E-02	0.00E+00	1.00E-01	1.35E-02	9.00E-03	0.00E+00	2.25E-02	1.23E-01
Iron Foundries	1.43E-01	0.07	1.28E-01	0.00E+00	0.00E+00	1.28E-01	0.00E+00	8.00E-03	0.00E+00	8.00E-03	1.36E-01
Custom Compound Purchased Resins Manufacturing	1.30E-01	0.06	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Large Appliance (Surface Coating)	1.28E-01	0.06	0.00E+00	1.25E-01	0.00E+00	1.25E-01	2.50E-03	0.00E+00	0.00E+00	2.50E-03	1.28E-01
Aluminum Foundries (Castings)	1.25E-01	0.06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.25E-01

Table 6 - 15 Base Year 1990 National Emission Estimates for Cadmium Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Commercial Printing, Letterpress, and Screen	1.25E-01	0.06	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Space Research and Technology	1.25E-01	0.06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.25E-01
Tire Production	1.21E-01	0.06	4.11E-02	4.15E-04	0.00E+00	4.15E-02	4.86E-02	4.91E-04	0.00E+00	4.91E-02	9.06E-02
Clay Products Manufacturing	9.40E-02	0.05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon Black Production	8.03E-02	0.04	4.85E-03	1.13E-02	0.00E+00	1.62E-02	1.39E-02	3.25E-02	0.00E+00	4.64E-02	6.25E-02
Residential Heating: Bituminous and Lignite Coal Combustion	4.92E-02	0.02	0.00E+00	3.41E-02	0.00E+00	3.41E-02	0.00E+00	6.97E-03	0.00E+00	6.97E-03	4.11E-02
Utility Boilers - Coke	2.37E-02	0.01	1.78E-02	0.00E+00	0.00E+00	1.78E-02	3.39E-03	0.00E+00	0.00E+00	3.39E-03	2.12E-02
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	2.30E-02	0.01	0.00E+00	2.30E-02	0.00E+00	2.30E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-02
Secondary Aluminum Smelting	2.30E-02	0.01	2.07E-02	0.00E+00	0.00E+00	2.07E-02	9.20E-04	0.00E+00	0.00E+00	9.20E-04	2.16E-02
Mineral Wool Production	2.00E-02	0.01	9.33E-03	0.00E+00	0.00E+00	9.33E-03	5.33E-03	0.00E+00	0.00E+00	5.33E-03	1.47E-02
Residential Heating: Anthracite Coal Combustion	1.87E-02	0.01	0.00E+00	1.30E-02	0.00E+00	1.30E-02	0.00E+00	2.65E-03	0.00E+00	2.65E-03	1.56E-02
Integrated Iron and Steel Manufacturing	1.80E-02	0.01	1.62E-02	0.00E+00	0.00E+00	1.62E-02	1.78E-03	0.00E+00	0.00E+00	1.78E-03	1.80E-02
Animal Cremation	5.92E-03	< 0.01	0.00E+00	3.43E-03	0.00E+00	3.43E-03	0.00E+00	9.47E-04	0.00E+00	9.47E-04	4.38E-03
Chemical Preparations	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Metal Heat Treating Manufacturing	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Nonferrous Wire Drawing and Insulating	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Plastic Parts and Products (Surface Coating)	5.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03	0.00E+00	5.00E-03	5.00E-03

Table 6 - 15 Base Year 1990 National Emission Estimates for Cadmium Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Plastics Foam Products Manufacturing (not subject to Plastic Parts (Surface Coating) MACT)	5.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03	0.00E+00	0.00E+00	5.00E-03	5.00E-03
Printing, Coating, and Dyeing of Fabrics	5.00E-03	< 0.01	5.00E-03	0.00E+00	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Unsupported Plastics Film & Sheet	3.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fluid Power Valves and Hose Fittings Manufacturing	3.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hydrochloric Acid Production	2.50E-03	< 0.01	1.38E-03	2.10E-05	0.00E+00	1.40E-03	8.26E-05	1.26E-06	0.00E+00	8.39E-05	1.49E-03
Other Cadmium Compound Production	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Reinforced Plastic Composites Production	2.50E-03	< 0.01	1.39E-03	2.09E-04	0.00E+00	1.59E-03	5.60E-04	8.45E-05	0.00E+00	6.45E-04	2.24E-03
Human Cremation	2.03E-03	< 0.01	0.00E+00	1.41E-03	0.00E+00	1.41E-03	0.00E+00	2.87E-04	0.00E+00	2.87E-04	1.70E-03
Primary Battery, Dry and Wet Manufacture	1.00E-03	< 0.01	5.00E-04	0.00E+00	0.00E+00	5.00E-04	0.00E+00	5.00E-04	0.00E+00	5.00E-04	1.00E-03

**Table 6 - 16 Base Year 1990 National Emission Estimates for
Carbon Tetrachloride**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Pulp and Paper Production (non-combustion) MACT I	4.27E+03	77.41	7.99E+02	0.00E+00	0.00E+00	7.99E+02	1.46E+03	0.00E+00	0.00E+00	1.46E+03	2.26E+03
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	4.13E+02	7.49	2.10E+02	3.66E+00	0.00E+00	2.14E+02	1.20E+02	0.00E+00	0.00E+00	1.20E+02	3.34E+02
MON	2.82E+02	5.10	2.04E+02	2.06E+00	0.00E+00	2.06E+02	3.31E+01	3.35E-01	0.00E+00	3.35E+01	2.40E+02
Industrial Inorganic Chemical Manufacturing	1.06E+02	1.91	1.02E+02	1.28E-01	0.00E+00	1.03E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E+02
Polymers & Resins (I, II, and IV)	8.85E+01	1.60	8.85E+01	0.00E+00	0.00E+00	8.85E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.85E+01
Publicly Owned Treatment Works (POTW) Emissions	7.09E+01	1.29	1.95E+00	4.73E+01	0.00E+00	4.92E+01	3.99E-01	9.64E+00	0.00E+00	1.00E+01	5.92E+01
Industrial Organic Chemicals Manufacturing	5.68E+01	1.03	3.03E+01	5.15E+00	0.00E+00	3.54E+01	1.23E+00	1.37E+00	0.00E+00	2.59E+00	3.80E+01
Chemicals and Allied Products Manufacturing	4.99E+01	0.90	4.99E+01	0.00E+00	0.00E+00	4.99E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.99E+01
Agricultural Chemicals and Pesticides	4.04E+01	0.73	4.04E+01	0.00E+00	0.00E+00	4.04E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.04E+01
Hydrochloric Acid Production	3.47E+01	0.63	1.92E+01	2.92E-01	0.00E+00	1.95E+01	1.15E+00	1.75E-02	0.00E+00	1.17E+00	2.06E+01
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	2.75E+01	0.50	2.33E+01	4.28E+00	0.00E+00	2.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.75E+01
Petroleum Refining (not subject to Petroleum Refining MACT)	2.29E+01	0.42	1.29E+01	1.24E+00	0.00E+00	1.42E+01	4.94E+00	4.80E-01	0.00E+00	5.42E+00	1.96E+01
Pharmaceuticals Production	2.17E+01	0.39	2.17E+01	0.00E+00	0.00E+00	2.17E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E+01
Chlorine Production	1.69E+01	0.31	0.00E+00	4.38E+00	0.00E+00	4.38E+00	0.00E+00	8.93E+00	0.00E+00	8.93E+00	1.33E+01
Tire Production	8.62E+00	0.16	2.92E+00	2.95E-02	0.00E+00	2.95E+00	3.46E+00	3.49E-02	0.00E+00	3.49E+00	6.45E+00
Industrial Gases Manufacturing	5.00E+00	0.09	5.00E+00	0.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E+00
Chemical Preparations	1.46E+00	0.03	1.46E+00	0.00E+00	0.00E+00	1.46E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E+00

**Table 6 - 16 Base Year 1990 National Emission Estimates for
Carbon Tetrachloride**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Cement, Hydraulic (not subject to Portland Cement MACT)	2.12E-01	< 0.01	0.00E+00	8.15E-02	0.00E+00	8.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.15E-02
Clay Products Manufacturing	1.25E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	1.25E-01	1.25E-01
Printing Ink	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Space Research and Technology	1.25E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.25E-01
Chemicals and Allied Products, nec	3.95E-02	< 0.01	0.00E+00	3.95E-02	0.00E+00	3.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.95E-02
Sewage Sludge Incineration	1.63E-02	< 0.01	0.00E+00	1.34E-02	0.00E+00	1.34E-02	0.00E+00	2.15E-03	0.00E+00	2.15E-03	1.56E-02
Municipal Landfills	5.50E-03	< 0.01	3.78E-04	3.44E-03	0.00E+00	3.82E-03	7.71E-05	7.02E-04	0.00E+00	7.79E-04	4.59E-03
Fabric Dress and Work Gloves	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Metal coating and allied services (3479)	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Nonferrous Wire Drawing and Insulating	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Paints and Allied Products Manufacturing	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Consumer Products Usage	5.10E-05	< 0.01	0.00E+00	3.54E-05	0.00E+00	3.54E-05	0.00E+00	7.22E-06	0.00E+00	7.22E-06	4.26E-05

Table 6 - 17 Base Year 1990 National Emission Estimates for Chloroform

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Pulp and Paper Production (non-combustion) MACT I	1.85E+04	81.42	3.46E+03	0.00E+00	0.00E+00	3.46E+03	6.33E+03	0.00E+00	0.00E+00	6.33E+03	9.79E+03
Pulp mills (not subject to Pulp and Paper MACT)	1.36E+03	5.98	4.44E+02	0.00E+00	0.00E+00	4.44E+02	6.02E+02	0.00E+00	0.00E+00	6.02E+02	1.05E+03
Paper Mills (not subject to Pulp and Paper MACT)	4.82E+02	2.12	1.77E+02	1.34E+01	0.00E+00	1.90E+02	2.12E+02	0.00E+00	0.00E+00	2.12E+02	4.02E+02
Publicly Owned Treatment Works (POTW) Emissions	4.39E+02	1.93	1.21E+01	2.92E+02	0.00E+00	3.05E+02	2.47E+00	5.97E+01	0.00E+00	6.22E+01	3.67E+02
Pharmaceuticals Production	4.09E+02	1.80	3.38E+02	1.05E+01	0.00E+00	3.48E+02	3.16E+01	9.77E-01	0.00E+00	3.26E+01	3.81E+02
Chemical Manufacturing: Chloroform Production (Storage Emissions)	3.52E+02	1.55	2.35E+02	0.00E+00	0.00E+00	2.35E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.35E+02
MON	2.24E+02	0.99	1.63E+02	1.64E+00	0.00E+00	1.64E+02	2.64E+01	2.66E-01	0.00E+00	2.66E+01	1.91E+02
Industrial Organic Chemicals Manufacturing	1.99E+02	0.88	1.58E+02	8.27E-01	0.00E+00	1.59E+02	3.76E+01	2.50E-01	0.00E+00	3.79E+01	1.97E+02
Formaldehyde, Acrolein, Acetaldehyde, Butyraldehyde Production	1.25E+02	0.55	2.22E+01	0.00E+00	0.00E+00	2.22E+01	1.03E+02	0.00E+00	0.00E+00	1.03E+02	1.25E+02
Consumer Products Usage	1.23E+02	0.54	0.00E+00	8.55E+01	0.00E+00	8.55E+01	0.00E+00	1.75E+01	0.00E+00	1.75E+01	1.03E+02
Chemical Manufacturing: Chloroform Production	1.19E+02	0.52	7.94E+01	0.00E+00	0.00E+00	7.94E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.94E+01
Polymers & Resins (I, II, and IV)	9.01E+01	0.40	9.01E+01	0.00E+00	0.00E+00	9.01E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.01E+01
Chemical Manufacturing: Chloromethanes Production	7.73E+01	0.34	2.28E+01	0.00E+00	0.00E+00	2.28E+01	1.28E+01	0.00E+00	0.00E+00	1.28E+01	3.56E+01
Fluorocarbon Production	4.59E+01	0.20	4.30E+01	0.00E+00	0.00E+00	4.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.30E+01
Agricultural Chemicals and Pesticides	3.76E+01	0.17	3.76E+01	0.00E+00	0.00E+00	3.76E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.76E+01
Food Preparations Production	2.90E+01	0.13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E+01	0.00E+00	0.00E+00	2.90E+01	2.90E+01
Chemical Manufacturing: Tetrachloroethylene	2.54E+01	0.11	4.36E+00	0.00E+00	0.00E+00	4.36E+00	1.98E+01	0.00E+00	0.00E+00	1.98E+01	2.41E+01

Table 6 - 17 Base Year 1990 National Emission Estimates for Chloroform

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Hydrochloric Acid Production	2.03E+01	0.09	1.12E+01	1.70E-01	0.00E+00	1.14E+01	6.70E-01	1.02E-02	0.00E+00	6.80E-01	1.20E+01
Paperboard Mills	1.60E+01	0.07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Paper And Allied Products	1.30E+01	0.06	3.50E+00	9.50E+00	0.00E+00	1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E+01
Industrial Inorganic Chemical Manufacturing	1.17E+01	0.05	1.25E-01	3.60E-01	0.00E+00	4.85E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E-01
Tire Production	8.98E+00	0.04	3.05E+00	3.08E-02	0.00E+00	3.08E+00	3.61E+00	3.64E-02	0.00E+00	3.64E+00	6.72E+00
Municipal Landfills	4.17E+00	0.02	2.86E-01	2.61E+00	0.00E+00	2.89E+00	5.85E-02	5.32E-01	0.00E+00	5.90E-01	3.48E+00
Plastic Parts and Products (Surface Coating)	3.25E+00	0.01	0.00E+00	3.25E+00	0.00E+00	3.25E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.25E+00
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	1.42E+00	0.01	0.00E+00	1.40E+00	0.00E+00	1.40E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E+00
Sewage Sludge Incineration	1.38E+00	0.01	0.00E+00	1.13E+00	0.00E+00	1.13E+00	0.00E+00	1.81E-01	0.00E+00	1.81E-01	1.32E+00
Unsupported Plastics Film & Sheet	1.08E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E+00	0.00E+00	1.08E+00	1.08E+00
Chemicals and Allied Products Manufacturing	9.70E-01	< 0.01	9.70E-01	0.00E+00	0.00E+00	9.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.70E-01
Industrial Gases Manufacturing	9.25E-01	< 0.01	9.25E-01	0.00E+00	0.00E+00	9.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.25E-01
Chemicals and Allied Products, nec	3.52E-01	< 0.01	0.00E+00	3.52E-01	0.00E+00	3.52E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-01
Secondary Lead Smelting	3.28E-01	< 0.01	2.27E-01	1.98E-02	0.00E+00	2.47E-01	4.64E-03	4.03E-04	0.00E+00	5.04E-03	2.52E-01
Clay Products Manufacturing	2.50E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	2.50E-01	2.50E-01
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	2.07E-01	< 0.01	1.70E-02	0.00E+00	0.00E+00	1.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-02
Chemical Preparations	1.25E-01	< 0.01	1.25E-01	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01

Table 6 - 17 Base Year 1990 National Emission Estimates for Chloroform

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	
Cement, Hydraulic (not subject to Portland Cement MACT)	9.85E-02	< 0.01	0.00E+00	9.85E-02	0.00E+00	9.85E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.85E-02
Adhesives and Sealants	9.55E-02	< 0.01	0.00E+00	9.55E-02	0.00E+00	9.55E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.55E-02
Nonmetallic Mineral Products Manufacturing	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Space Research and Technology	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	2.50E-03

Table 6 - 18 Base Year 1990 National Emission Estimates for Chromium Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Hard Chromium Electroplating	1.60E+02	17.20	6.78E+00	1.29E+02	0.00E+00	1.36E+02	4.79E-01	9.10E+00	0.00E+00	9.58E+00	1.45E+02
Utility Boilers - Coal	7.00E+01	7.55	2.70E+01	0.00E+00	0.00E+00	2.70E+01	1.77E+01	0.00E+00	0.00E+00	1.77E+01	4.47E+01
Stainless and Non-stainless Steel Manufacture - EAF	4.13E+01	4.45	2.77E+01	2.38E+00	0.00E+00	3.01E+01	7.69E+00	9.16E-01	0.00E+00	8.61E+00	3.87E+01
Petroleum Refining (not subject to Petroleum Refining MACT)	3.84E+01	4.14	2.71E+01	1.66E-01	0.00E+00	2.72E+01	8.91E+00	0.00E+00	0.00E+00	8.91E+00	3.61E+01
Petroleum Refineries: Catalytic Cracking (Fluid and other) Units, Catalytic Reforming Units, and Sulfur Plant Units	3.60E+01	3.88	2.18E+01	0.00E+00	0.00E+00	2.18E+01	8.99E+00	0.00E+00	0.00E+00	8.99E+00	3.08E+01
Steel Pipe and Tubes Manufacturing	3.45E+01	3.72	3.32E+01	2.05E-01	0.00E+00	3.34E+01	2.50E-01	6.25E-01	0.00E+00	8.75E-01	3.42E+01
Aerospace Industries	2.98E+01	3.22	2.78E+01	7.10E-01	0.00E+00	2.85E+01	2.05E-02	5.46E-03	0.00E+00	2.60E-02	2.86E+01
Fabricated Plate Work (Boiler Shops)	2.96E+01	3.19	1.72E+01	1.18E+01	0.00E+00	2.90E+01	0.00E+00	1.85E-02	0.00E+00	1.85E-02	2.90E+01
Mobile Sources: On-Road Vehicles	2.81E+01	3.03	0.00E+00	0.00E+00	1.39E+01	1.39E+01	0.00E+00	0.00E+00	4.77E+00	4.77E+00	1.87E+01
Fabricated Structural Metal Manufacturing	2.80E+01	3.02	0.00E+00	3.76E+00	0.00E+00	3.76E+00	1.25E-01	2.62E+00	0.00E+00	2.74E+00	6.50E+00
Mobile Sources: Non-Road Vehicles and Equipment - Other	2.51E+01	2.71	0.00E+00	0.00E+00	1.74E+01	1.74E+01	0.00E+00	0.00E+00	3.56E+00	3.56E+00	2.10E+01
Industrial Process Cooling Towers	2.50E+01	2.69	1.68E+01	0.00E+00	0.00E+00	1.68E+01	3.75E+00	0.00E+00	0.00E+00	3.75E+00	2.05E+01
Steel Foundries	2.20E+01	2.38	9.70E-01	9.94E+00	0.00E+00	1.09E+01	4.66E-01	8.96E+00	0.00E+00	9.43E+00	2.03E+01
Coke By-Product Plants	2.09E+01	2.25	1.56E+01	0.00E+00	0.00E+00	1.56E+01	2.98E+00	0.00E+00	0.00E+00	2.98E+00	1.86E+01
Iron Foundries	1.66E+01	1.79	9.25E+00	1.56E+00	0.00E+00	1.08E+01	6.41E-01	1.02E+00	0.00E+00	1.66E+00	1.25E+01
Plating And Polishing	1.55E+01	1.68	2.60E+00	1.05E+01	0.00E+00	1.31E+01	2.50E-01	1.03E+00	0.00E+00	1.28E+00	1.44E+01
Wood Preserving	1.47E+01	1.58	0.00E+00	1.23E+00	0.00E+00	1.23E+00	0.00E+00	2.37E-01	0.00E+00	2.37E-01	1.47E+00

Table 6 - 18 Base Year 1990 National Emission Estimates for Chromium Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Plastic Parts and Products (Surface Coating)	1.47E+01	1.58	1.10E+00	3.59E+00	0.00E+00	4.68E+00	1.66E+00	3.40E+00	0.00E+00	5.06E+00	9.75E+00
Industrial Inorganic Chemical Manufacturing	1.40E+01	1.50	0.00E+00	1.08E+01	0.00E+00	1.08E+01	1.25E+00	2.55E-01	0.00E+00	1.51E+00	1.23E+01
Industrial Boilers	1.23E+01	1.33	6.57E+00	1.32E+00	0.00E+00	7.89E+00	1.59E+00	3.24E-01	0.00E+00	1.91E+00	9.80E+00
MON	1.21E+01	1.30	8.76E+00	8.85E-02	0.00E+00	8.85E+00	1.42E+00	1.43E-02	0.00E+00	1.43E+00	1.03E+01
Blast Furnaces and Steel Mills	1.19E+01	1.28	2.65E+00	5.32E+00	0.00E+00	7.98E+00	9.70E-02	1.95E-01	0.00E+00	2.92E-01	8.27E+00
Paints and Allied Products Manufacturing	1.19E+01	1.28	4.10E+00	5.39E+00	0.00E+00	9.49E+00	7.91E-01	1.34E+00	0.00E+00	2.13E+00	1.16E+01
Decorative Chromium Electroplating	1.15E+01	1.24	4.89E-01	9.29E+00	0.00E+00	9.78E+00	3.45E-02	6.55E-01	0.00E+00	6.90E-01	1.05E+01
Chemical Manufacturing: Chromium Compounds	9.79E+00	1.06	0.00E+00	5.20E+00	0.00E+00	5.20E+00	0.00E+00	4.59E+00	0.00E+00	4.59E+00	9.79E+00
Electrometallurgical Products Manufacturing	9.78E+00	1.05	1.61E-01	2.48E+00	0.00E+00	2.64E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	2.76E+00
Pulp and Paper Production (combustion) MACT II	8.03E+00	0.87	1.49E+00	0.00E+00	0.00E+00	1.49E+00	2.75E+00	0.00E+00	0.00E+00	2.75E+00	4.24E+00
Industrial Gases Manufacturing	6.61E+00	0.71	6.61E+00	0.00E+00	0.00E+00	6.61E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.61E+00
Refractories Manufacturing	6.00E+00	0.65	2.75E+00	4.85E-01	0.00E+00	3.23E+00	9.27E-01	1.64E-01	0.00E+00	1.09E+00	4.32E+00
Primary Metal Products Manufacturing	5.66E+00	0.61	0.00E+00	4.92E+00	0.00E+00	4.92E+00	0.00E+00	5.71E-01	0.00E+00	5.71E-01	5.49E+00
Iron and Steel Forging	5.53E+00	0.60	9.20E-02	4.37E+00	0.00E+00	4.46E+00	2.73E-01	4.23E-01	0.00E+00	6.96E-01	5.16E+00
Clay Products Manufacturing	5.48E+00	0.59	6.25E-01	7.19E-01	0.00E+00	1.34E+00	0.00E+00	3.83E-01	0.00E+00	3.83E-01	1.73E+00
Utility Boilers - Oil	4.70E+00	0.51	2.71E+00	1.16E+00	0.00E+00	3.87E+00	4.52E-01	1.94E-01	0.00E+00	6.45E-01	4.52E+00
Motor and Generators Manufacturing	4.61E+00	0.50	0.00E+00	4.61E+00	0.00E+00	4.61E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.61E+00

Table 6 - 18 Base Year 1990 National Emission Estimates for Chromium Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Inorganic Pigments Manufacturing	4.60E+00	0.50	1.49E-01	3.18E+00	0.00E+00	3.33E+00	0.00E+00	6.50E-03	0.00E+00	6.50E-03	3.33E+00
Metal Stampings Manufacturing	4.34E+00	0.47	5.00E-03	5.78E-01	0.00E+00	5.83E-01	3.20E+00	5.05E-02	0.00E+00	3.25E+00	3.83E+00
Custom Compound Purchased Resins Manufacturing	4.33E+00	0.47	2.50E-01	3.57E+00	0.00E+00	3.82E+00	0.00E+00	1.27E-01	0.00E+00	1.27E-01	3.94E+00
Heating Equipment, Except Electric	4.26E+00	0.46	0.00E+00	4.13E+00	0.00E+00	4.13E+00	0.00E+00	1.25E-02	0.00E+00	1.25E-02	4.14E+00
Hazardous Waste Incineration	4.18E+00	0.45	2.20E+00	0.00E+00	0.00E+00	2.20E+00	8.41E-01	0.00E+00	0.00E+00	8.41E-01	3.04E+00
Municipal Waste Combustors	3.96E+00	0.43	2.53E+00	1.33E-01	0.00E+00	2.66E+00	7.09E-01	3.73E-02	0.00E+00	7.46E-01	3.40E+00
Chromic Acid Anodizing	3.90E+00	0.42	1.66E-01	3.15E+00	0.00E+00	3.32E+00	1.17E-02	2.22E-01	0.00E+00	2.34E-01	3.55E+00
Primary Copper Smelting	3.61E+00	0.39	4.39E-01	1.62E-01	0.00E+00	6.01E-01	1.47E+00	5.45E-01	0.00E+00	2.02E+00	2.62E+00
Sewage Sludge Incineration	3.14E+00	0.34	0.00E+00	2.59E+00	0.00E+00	2.59E+00	0.00E+00	4.14E-01	0.00E+00	4.14E-01	3.00E+00
Fabricated Metal Products, nec	3.13E+00	0.34	9.48E-01	1.03E+00	0.00E+00	1.98E+00	5.00E-03	3.68E-01	0.00E+00	3.73E-01	2.35E+00
Chemical Preparations	2.89E+00	0.31	6.25E-01	2.10E+00	0.00E+00	2.72E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.72E+00
Integrated Iron and Steel Manufacturing	2.80E+00	0.30	2.53E+00	0.00E+00	0.00E+00	2.53E+00	2.76E-01	0.00E+00	0.00E+00	2.76E-01	2.80E+00
Residential Heating: Wood/Wood Residue Combustion	2.70E+00	0.29	0.00E+00	1.86E+00	0.00E+00	1.86E+00	0.00E+00	4.05E-01	0.00E+00	4.05E-01	2.27E+00
Institutional/Commercial Heating	2.63E+00	0.28	0.00E+00	2.05E+00	0.00E+00	2.05E+00	0.00E+00	3.45E-01	0.00E+00	3.45E-01	2.40E+00
Oil and Gas Field Machinery Manufacturing	2.54E+00	0.27	5.00E-03	2.26E+00	0.00E+00	2.26E+00	0.00E+00	1.57E-01	0.00E+00	1.57E-01	2.42E+00
Pumps and Pumping Equipment Manufacturing	2.43E+00	0.26	1.25E-01	2.03E+00	0.00E+00	2.15E+00	0.00E+00	1.70E-02	0.00E+00	1.70E-02	2.17E+00
Nonferrous Rolling and Drawing	2.42E+00	0.26	2.15E+00	2.67E-01	0.00E+00	2.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E+00

Table 6 - 18 Base Year 1990 National Emission Estimates for Chromium Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Leather Tanning and Finishing Operations	2.18E+00	0.23	1.05E+00	1.16E-01	0.00E+00	1.16E+00	1.65E-04	1.84E-05	0.00E+00	1.84E-04	1.16E+00
Glass Containers	2.06E+00	0.22	5.14E-01	1.02E+00	0.00E+00	1.53E+00	2.84E-01	1.25E-01	0.00E+00	4.09E-01	1.94E+00
Secondary Nonferrous Metals Production	2.03E+00	0.22	2.58E-01	6.32E-01	0.00E+00	8.89E-01	2.50E-01	5.06E-01	0.00E+00	7.56E-01	1.65E+00
Metal Coil (Surface Coating)	2.01E+00	0.22	8.91E-01	6.70E-02	0.00E+00	9.58E-01	5.35E-01	4.03E-02	0.00E+00	5.75E-01	1.53E+00
Chemicals and Allied Products Manufacturing	1.88E+00	0.20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E+00	0.00E+00	0.00E+00	1.88E+00	1.88E+00
Printing Trades Machinery Manufacturing	1.85E+00	0.20	0.00E+00	1.85E+00	0.00E+00	1.85E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E+00
Farm Machinery and Equipment Manufacturing	1.78E+00	0.19	1.25E-01	0.00E+00	0.00E+00	1.25E-01	6.30E-01	1.02E+00	0.00E+00	1.65E+00	1.78E+00
Industrial Organic Chemicals Manufacturing	1.69E+00	0.18	9.56E-01	1.29E-01	0.00E+00	1.09E+00	5.55E-01	0.00E+00	0.00E+00	5.55E-01	1.64E+00
Speed Changers, Drives, and Gears	1.64E+00	0.18	0.00E+00	3.10E-02	0.00E+00	3.10E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.10E-02
Tire Production	1.62E+00	0.17	5.49E-01	5.55E-03	0.00E+00	5.55E-01	6.50E-01	6.56E-03	0.00E+00	6.56E-01	1.21E+00
Printing, Coating, and Dyeing of Fabrics	1.56E+00	0.17	4.70E-02	1.46E+00	0.00E+00	1.51E+00	0.00E+00	5.00E-04	0.00E+00	5.00E-04	1.51E+00
Power Driven Handtools	1.50E+00	0.16	1.27E-01	0.00E+00	0.00E+00	1.27E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-01
Large Appliance (Surface Coating)	1.48E+00	0.16	3.58E-01	2.55E-01	0.00E+00	6.13E-01	2.55E-01	1.00E-02	0.00E+00	2.65E-01	8.78E-01
Aluminum Sheet, Plate, and Foil manufacturing	1.36E+00	0.15	1.36E+00	0.00E+00	0.00E+00	1.36E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E+00
Nonferrous Foundries, nec	1.29E+00	0.14	1.80E-01	8.51E-01	0.00E+00	1.03E+00	2.50E-01	6.50E-03	0.00E+00	2.57E-01	1.29E+00
Residential Heating: Distillate Oil Combustion	1.27E+00	0.14	0.00E+00	8.81E-01	0.00E+00	8.81E-01	0.00E+00	1.80E-01	0.00E+00	1.80E-01	1.06E+00
Reinforced Plastic Composites Production	1.24E+00	0.13	6.89E-01	1.04E-01	0.00E+00	7.92E-01	2.79E-01	4.20E-02	0.00E+00	3.21E-01	1.11E+00

Table 6 - 18 Base Year 1990 National Emission Estimates for Chromium Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Valves and Pipe Fittings Manufacturing	1.18E+00	0.13	1.30E-02	6.62E-01	0.00E+00	6.75E-01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	8.00E-01
Pulp mills (not subject to Pulp and Paper MACT)	1.14E+00	0.12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E+00	0.00E+00	0.00E+00	1.14E+00	1.14E+00
Nitrogenous Fertilizers	1.10E+00	0.12	8.50E-01	0.00E+00	0.00E+00	8.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.50E-01
Carburetors, Pistons, Rings and Valves Manufacturing	1.10E+00	0.12	2.50E-01	2.50E-01	0.00E+00	5.00E-01	5.95E-01	0.00E+00	0.00E+00	5.95E-01	1.09E+00
Sheet Metal Work	1.03E+00	0.11	2.50E-01	2.76E-01	0.00E+00	5.26E-01	0.00E+00	5.00E-01	0.00E+00	5.00E-01	1.03E+00
Miscellaneous Fabricated Metal Products	1.03E+00	0.11	3.75E-01	6.51E-01	0.00E+00	1.03E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E+00
Internal Combustion Engine Manufacturing	1.02E+00	0.11	5.00E-01	2.50E-03	0.00E+00	5.02E-01	5.16E-01	0.00E+00	0.00E+00	5.16E-01	1.02E+00
Automotive stampings	1.02E+00	0.11	1.25E-01	3.90E-01	0.00E+00	5.15E-01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	6.40E-01
Wire Springs	1.01E+00	0.11	0.00E+00	1.00E+00	0.00E+00	1.00E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	1.01E+00
Hoists, Cranes, and Monorails	1.00E+00	0.11	1.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00
Ball and Roller Bearings Manufacturing	9.36E-01	0.10	1.25E-02	1.69E-01	0.00E+00	1.81E-01	1.25E-01	2.50E-01	0.00E+00	3.75E-01	5.56E-01
Metal coating and allied services (3479)	9.11E-01	0.10	5.50E-03	5.30E-01	0.00E+00	5.35E-01	0.00E+00	2.51E-01	0.00E+00	2.51E-01	7.86E-01
Primary Aluminum Production	9.10E-01	0.10	1.10E-02	0.00E+00	0.00E+00	1.10E-02	1.25E-01	0.00E+00	0.00E+00	1.25E-01	1.36E-01
Air and Gas Compressors	9.00E-01	0.10	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Paper Industries Machinery	8.86E-01	0.10	5.00E-03	3.75E-01	0.00E+00	3.80E-01	2.55E-01	2.52E-01	0.00E+00	5.06E-01	8.87E-01
Copper Rolling and Drawing	8.79E-01	0.09	7.52E-01	1.26E-01	0.00E+00	8.78E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.78E-01
Burial Caskets	8.77E-01	0.09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 6 - 18 Base Year 1990 National Emission Estimates for Chromium Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	
Mining Machinery Manufacturing	8.77E-01	0.09	0.00E+00	3.78E-01	0.00E+00	3.78E-01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	5.02E-01
Pressed and Blown Glass and Glassware Manufacturing	8.65E-01	0.09	1.75E-01	0.00E+00	0.00E+00	1.75E-01	2.70E-01	1.25E-01	0.00E+00	3.95E-01	5.70E-01
Transformers, Except Electronic	8.37E-01	0.09	7.00E-01	5.00E-03	0.00E+00	7.05E-01	1.33E-01	0.00E+00	0.00E+00	1.33E-01	8.38E-01
Steel Wire and Related Products Manufacturing	8.17E-01	0.09	1.25E-01	3.83E-01	0.00E+00	5.08E-01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	6.33E-01
Soap and Other Detergents Manufacturing	8.12E-01	0.09	5.56E-01	2.55E-01	0.00E+00	8.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.11E-01
Cement, Hydraulic (not subject to Portland Cement MACT)	8.01E-01	0.09	2.55E-01	2.21E-01	0.00E+00	4.76E-01	0.00E+00	1.37E-01	0.00E+00	1.37E-01	6.13E-01
Cold Finishing of Steel Shapes	7.89E-01	0.09	2.50E-03	5.37E-01	0.00E+00	5.39E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.39E-01
Nonclay Refractories (not subject to Refractories Manufacturing MACT)	7.84E-01	0.08	0.00E+00	6.67E-01	0.00E+00	6.67E-01	0.00E+00	1.17E-01	0.00E+00	1.17E-01	7.84E-01
Polymers & Resins (I, II, and IV)	7.04E-01	0.08	3.94E-01	1.30E-01	0.00E+00	5.24E-01	5.35E-02	0.00E+00	0.00E+00	5.35E-02	5.77E-01
Medical Waste Incinerators	7.03E-01	0.08	4.91E-02	2.78E-01	0.00E+00	3.27E-01	2.41E-02	1.37E-01	0.00E+00	1.61E-01	4.88E-01
Printing Ink	6.61E-01	0.07	1.25E-01	5.36E-01	0.00E+00	6.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.61E-01
Mobile Sources: Non-Road Vehicles and Equipment - Commercial Marine Vessels	6.60E-01	0.07	0.00E+00	0.00E+00	6.60E-01	6.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.60E-01
Miscellaneous Fabricated Wire Products	6.56E-01	0.07	0.00E+00	4.02E-01	0.00E+00	4.02E-01	0.00E+00	2.53E-01	0.00E+00	2.53E-01	6.54E-01
General Industrial Machinery Manufacturing	6.49E-01	0.07	1.27E-01	5.10E-01	0.00E+00	6.36E-01	3.00E-03	5.00E-03	0.00E+00	8.00E-03	6.44E-01
Electrical Equipment and Supplies, nec	6.30E-01	0.07	0.00E+00	6.25E-01	0.00E+00	6.25E-01	5.00E-03	0.00E+00	0.00E+00	5.00E-03	6.30E-01
Special Dies, Tools, Jigs and Fixtures	6.27E-01	0.07	0.00E+00	3.75E-01	0.00E+00	3.75E-01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	5.00E-01
Hand and Edge Tools Manufacturing	5.60E-01	0.06	1.25E-01	5.25E-02	0.00E+00	1.78E-01	0.00E+00	2.53E-01	0.00E+00	2.53E-01	4.30E-01

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			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Agricultural Chemicals and Pesticides	5.55E-01	0.06	0.00E+00	5.55E-02	0.00E+00	5.55E-02	0.00E+00	5.00E-01	0.00E+00	5.00E-01	5.55E-01
Construction Machinery Manufacturing	5.51E-01	0.06	1.60E-02	1.83E-01	0.00E+00	1.99E-01	1.52E-01	2.00E-01	0.00E+00	3.52E-01	5.51E-01
Aluminum Extruded Products	5.34E-01	0.06	1.15E-02	3.78E-01	0.00E+00	3.89E-01	1.28E-01	1.10E-02	0.00E+00	1.39E-01	5.27E-01
Conveyors and Conveying Equipment Manufacturing	5.15E-01	0.06	0.00E+00	1.30E-01	0.00E+00	1.30E-01	5.00E-03	3.75E-01	0.00E+00	3.80E-01	5.10E-01
Turbines and Turbine Generator Sets	5.04E-01	0.05	1.28E-01	3.77E-01	0.00E+00	5.04E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.04E-01
Unsupported Plastics Profile Shapes	5.02E-01	0.05	0.00E+00	3.78E-01	0.00E+00	3.78E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.78E-01
Steel and Iron Reclamation- Auto Scrap Burning	5.00E-01	0.05	0.00E+00	5.00E-01	0.00E+00	5.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-01
Railroad Equipment Manufacturing	4.73E-01	0.05	1.28E-01	0.00E+00	0.00E+00	1.28E-01	2.50E-03	2.50E-01	0.00E+00	2.53E-01	3.80E-01
Manufacturing Industries, nec	4.71E-01	0.05	0.00E+00	3.24E-01	0.00E+00	3.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.24E-01
Plumbing Fixture Fittings and Trim	4.60E-01	0.05	0.00E+00	3.35E-01	0.00E+00	3.35E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.35E-01
Hardware Manufacturing	4.34E-01	0.05	1.60E-01	2.61E-01	0.00E+00	4.20E-01	0.00E+00	5.50E-03	0.00E+00	5.50E-03	4.26E-01
Primary Nonferrous Metals Production	4.12E-01	0.04	0.00E+00	1.60E-01	0.00E+00	1.60E-01	1.28E-01	0.00E+00	0.00E+00	1.28E-01	2.87E-01
Nonferrous Forgings	4.06E-01	0.04	1.35E-02	2.67E-01	0.00E+00	2.81E-01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	4.06E-01
Miscellaneous Plastics Products	3.93E-01	0.04	0.00E+00	1.75E-02	0.00E+00	1.75E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E-02
Industrial Machinery, nec	3.92E-01	0.04	0.00E+00	3.85E-01	0.00E+00	3.85E-01	2.00E-03	0.00E+00	0.00E+00	2.00E-03	3.87E-01
Paper and Other Webs (Surface Coating)	3.85E-01	0.04	1.00E-02	2.50E-01	0.00E+00	2.60E-01	1.25E-01	0.00E+00	0.00E+00	1.25E-01	3.85E-01
Surgical and Medical Instruments Manufacturing	3.80E-01	0.04	2.55E-01	1.25E-01	0.00E+00	3.80E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.80E-01

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			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Metal Furniture (Surface Coating)	3.78E-01	0.04	1.25E-01	0.00E+00	0.00E+00	1.25E-01	2.50E-01	2.50E-03	0.00E+00	2.53E-01	3.78E-01
Metal Sanitary Ware Manufacturing	3.78E-01	0.04	0.00E+00	2.53E-01	0.00E+00	2.53E-01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	3.78E-01
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	3.77E-01	0.04	2.50E-03	3.23E-01	0.00E+00	3.26E-01	0.00E+00	4.65E-02	0.00E+00	4.65E-02	3.72E-01
Environmental Controls Manufacturing	3.75E-01	0.04	2.50E-01	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Metal Valves	3.09E-01	0.03	0.00E+00	1.28E-01	0.00E+00	1.28E-01	0.00E+00	4.60E-02	0.00E+00	4.60E-02	1.74E-01
Electrical Housewares and Fans	3.03E-01	0.03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Industrial Furnaces and Ovens	2.90E-01	0.03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-01	0.00E+00	1.63E-01	1.63E-01
Machine tools, Metal Cutting Types	2.79E-01	0.03	0.00E+00	2.52E-01	0.00E+00	2.52E-01	0.00E+00	2.60E-02	0.00E+00	2.60E-02	2.78E-01
Meat Packing Plants	2.78E-01	0.03	2.73E-01	0.00E+00	0.00E+00	2.73E-01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	2.78E-01
Cutlery	2.67E-01	0.03	7.50E-03	0.00E+00	0.00E+00	7.50E-03	0.00E+00	2.50E-01	0.00E+00	2.50E-01	2.58E-01
Bolts, Nuts, Rivets and Washers Manufacturing	2.66E-01	0.03	2.60E-01	5.00E-03	0.00E+00	2.65E-01	5.00E-04	0.00E+00	0.00E+00	5.00E-04	2.66E-01
Food Products Machinery Manufacturing	2.60E-01	0.03	0.00E+00	1.00E-02	0.00E+00	1.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02
Fabricated Pipe and Fittings	2.58E-01	0.03	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Shipbuilding and Ship Repair (Surface Coating)	2.58E-01	0.03	1.93E-01	3.93E-03	0.00E+00	1.97E-01	3.74E-02	7.64E-04	0.00E+00	3.82E-02	2.35E-01
Engine Electric Equipment	2.55E-01	0.03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-01	0.00E+00	0.00E+00	2.55E-01	2.55E-01
Metalworking Machinery	2.53E-01	0.03	0.00E+00	2.53E-01	0.00E+00	2.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-01
Residential Heating: Bituminous and Lignite Coal Combustion	2.51E-01	0.03	0.00E+00	1.74E-01	0.00E+00	1.74E-01	0.00E+00	3.55E-02	0.00E+00	3.55E-02	2.10E-01

Table 6 - 18 Base Year 1990 National Emission Estimates for Chromium Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Brooms and Brushes	2.50E-01	0.03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01	0.00E+00	2.50E-01	2.50E-01
Electric Lamps	2.50E-01	0.03	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Instruments to Measure Electricity	2.50E-01	0.03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	2.50E-01	2.50E-01
Iron and Steel Foundries (not subject to Iron Foundries MACT)	2.50E-01	0.03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01	0.00E+00	2.50E-01	2.50E-01
Lead Pencils, Art Goods Manufacturing	2.50E-01	0.03	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Metal Doors, Sash, and Trim	2.50E-01	0.03	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Nonferrous Die-castings, Except Aluminum	2.50E-01	0.03	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Prepared Feeds Manufacturing	2.50E-01	0.03	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Primary Copper (not subject to Primary Copper Smelting MACT)	2.50E-01	0.03	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Products of Purchased Glass	2.50E-01	0.03	2.50E-01	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Small Arms Ammunition	2.50E-01	0.03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Surgical Appliances and Supplies Manufacturing	2.50E-01	0.03	2.50E-01	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Blowers and Fans	2.20E-01	0.02	0.00E+00	1.95E-02	0.00E+00	1.95E-02	7.00E-02	1.30E-01	0.00E+00	2.00E-01	2.20E-01
Printing/Publishing (Surface Coating)	2.05E-01	0.02	1.25E-01	8.00E-02	0.00E+00	2.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.05E-01
Polishes and Sanitation Goods Manufacturing	1.89E-01	0.02	0.00E+00	1.15E-02	0.00E+00	1.15E-02	1.77E-01	0.00E+00	0.00E+00	1.77E-01	1.89E-01
Welding Apparatus	1.77E-01	0.02	0.00E+00	1.77E-01	0.00E+00	1.77E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-01
Boat Manufacturing	1.59E-01	0.02	1.30E-01	0.00E+00	0.00E+00	1.30E-01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	1.35E-01

Table 6 - 18 Base Year 1990 National Emission Estimates for Chromium Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Screw Machine Products Manufacturing	1.58E-01	0.02	2.50E-03	2.55E-02	0.00E+00	2.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-02
Food Products Machinery	1.55E-01	0.02	1.95E-02	1.36E-01	0.00E+00	1.55E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-01
Small Arms	1.53E-01	0.02	2.50E-02	0.00E+00	0.00E+00	2.50E-02	0.00E+00	1.28E-01	0.00E+00	1.28E-01	1.53E-01
Stationary Internal Combustion Engines	1.50E-01	0.02	6.03E-02	4.02E-02	0.00E+00	1.00E-01	1.35E-02	9.00E-03	0.00E+00	2.25E-02	1.23E-01
Open Burning: Scrap Tires	1.38E-01	0.01	0.00E+00	9.40E-02	0.00E+00	9.40E-02	0.00E+00	2.21E-02	0.00E+00	2.21E-02	1.16E-01
Tanks and Tank Components Manufacturing	1.38E-01	0.01	1.35E-01	2.50E-03	0.00E+00	1.38E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-01
Typewriters Computer Storage Devices	1.38E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-01	0.00E+00	0.00E+00	1.38E-01	1.38E-01
Aluminum Foundries (Castings)	1.36E-01	0.01	0.00E+00	1.31E-01	0.00E+00	1.31E-01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	1.36E-01
Magnetic and Optical Recording Media Manufacturing	1.35E-01	0.01	2.50E-03	1.33E-01	0.00E+00	1.35E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-01
Welding Apparatus, Electric	1.34E-01	0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Unsupported Plastics Film & Sheet	1.33E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fabricated Rubber Products, nec	1.33E-01	0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	2.50E-03	5.00E-03
Motor Vehicle Equipment	1.31E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Machine Tool Accessories	1.30E-01	0.01	2.50E-03	2.50E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Metal Heat Treating Manufacturing	1.30E-01	0.01	0.00E+00	1.30E-01	0.00E+00	1.30E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-01
Wool Fiberglass Manufacturing	1.30E-01	0.01	7.10E-02	7.17E-04	0.00E+00	7.17E-02	4.88E-02	4.93E-04	0.00E+00	4.93E-02	1.21E-01
Aluminum Die-Castings	1.28E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 6 - 18 Base Year 1990 National Emission Estimates for Chromium Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Electrical Industrial Apparatus, nec	1.28E-01	0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Guided Missiles and Space Vehicles Manufacturing	1.28E-01	0.01	1.28E-01	0.00E+00	0.00E+00	1.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01
Plumbing And Heating, Except Electric	1.28E-01	0.01	0.00E+00	1.28E-01	0.00E+00	1.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01
Space Research and Technology	1.28E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01	0.00E+00	1.28E-01	1.28E-01
Power Transmission Equipment	1.26E-01	0.01	1.25E-01	0.00E+00	0.00E+00	1.25E-01	0.00E+00	5.00E-04	0.00E+00	5.00E-04	1.26E-01
Wood Furniture (Surface Coating)	1.26E-01	0.01	5.00E-04	0.00E+00	0.00E+00	5.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-04
Aluminum Foundries	1.25E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Electrical Apparatus and Equipment	1.25E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fabricated Metal Products Manufacturing	1.25E-01	0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Fluid Power Valves and Hose Fittings Manufacturing	1.25E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heavy Construction, Nec	1.25E-01	0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Manifold Business Forms	1.25E-01	0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Metal Forgings and Stampings	1.25E-01	0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Metal Services, nec	1.25E-01	0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Rolling Mill Machinery	1.25E-01	0.01	1.25E-01	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Rubber and Plastic Hose and Belting Manufacturing	1.25E-01	0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Sawmills and Planing Mills, general	1.25E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Space Vehicle Parts and Equipment, nec	1.25E-01	0.01	1.25E-01	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Switchgear and Switchboard Apparatus	1.25E-01	0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Utility Boilers - Coke	1.21E-01	0.01	9.07E-02	0.00E+00	0.00E+00	9.07E-02	1.73E-02	0.00E+00	0.00E+00	1.73E-02	1.08E-01
Search and Navigation Equipment	1.05E-01	0.01	1.05E-01	0.00E+00	0.00E+00	1.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-01
Residential Heating: Anthracite Coal Combustion	9.52E-02	0.01	0.00E+00	6.60E-02	0.00E+00	6.60E-02	0.00E+00	1.35E-02	0.00E+00	1.35E-02	7.95E-02
Mineral Wool Production	7.00E-02	0.01	3.27E-02	0.00E+00	0.00E+00	3.27E-02	1.87E-02	0.00E+00	0.00E+00	1.87E-02	5.13E-02
Special Industry Machinery, nec	6.25E-02	0.01	0.00E+00	6.00E-02	0.00E+00	6.00E-02	0.00E+00	2.50E-03	0.00E+00	2.50E-03	6.25E-02
Fluid Power Pumps and Motors	4.05E-02	< 0.01	0.00E+00	1.90E-02	0.00E+00	1.90E-02	2.15E-02	0.00E+00	0.00E+00	2.15E-02	4.05E-02
Secondary Lead Smelting	3.50E-02	< 0.01	2.42E-02	2.11E-03	0.00E+00	2.64E-02	4.95E-04	4.30E-05	0.00E+00	5.38E-04	2.69E-02
Air Transportation, Scheduled	3.00E-02	< 0.01	3.00E-02	0.00E+00	0.00E+00	3.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-02
Fabricated Structural Metal Products	2.80E-02	< 0.01	0.00E+00	2.35E-02	0.00E+00	2.35E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.35E-02
Plywood/Particle Board Manufacturing	1.75E-02	< 0.01	1.36E-03	3.50E-05	0.00E+00	1.40E-03	5.47E-03	1.40E-04	0.00E+00	5.61E-03	7.01E-03
Animal Cremation	1.59E-02	< 0.01	0.00E+00	9.22E-03	0.00E+00	9.22E-03	0.00E+00	2.54E-03	0.00E+00	2.54E-03	1.18E-02
Process Control Instruments	1.35E-02	< 0.01	5.00E-03	8.50E-03	0.00E+00	1.35E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-02
Miscellaneous Metal Work	1.15E-02	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nonferrous Wire Drawing and Insulating	1.15E-02	< 0.01	1.15E-02	0.00E+00	0.00E+00	1.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-02
Asphalt Concrete Manufacturing	9.00E-03	< 0.01	0.00E+00	9.00E-03	0.00E+00	9.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.00E-03

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112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Asphalt Roofing Manufacturing	8.00E-03	< 0.01	0.00E+00	8.00E-03	0.00E+00	8.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.00E-03
Electronic Components, nec	7.50E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	2.50E-03	0.00E+00	2.50E-03	7.50E-03
Ordnance and Accessories Manufacturing	7.50E-03	< 0.01	5.00E-03	0.00E+00	0.00E+00	5.00E-03	2.50E-03	0.00E+00	0.00E+00	2.50E-03	7.50E-03
Adhesives and Sealants	6.50E-03	< 0.01	5.50E-03	1.00E-03	0.00E+00	6.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.50E-03
Noncurrent-Carrying Wiring Devices	6.00E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	3.50E-03	0.00E+00	0.00E+00	3.50E-03	6.00E-03
Human Cremation	5.48E-03	< 0.01	0.00E+00	3.80E-03	0.00E+00	3.80E-03	0.00E+00	7.76E-04	0.00E+00	7.76E-04	4.58E-03
Analytical Instruments	5.00E-03	< 0.01	5.00E-03	0.00E+00	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Commercial Physical Research	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Lighting Equipment	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Measuring and Controlling Devices, nec	5.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Metal Barrels, Drums, and Pails Manufacturing	5.00E-03	< 0.01	2.50E-03	2.50E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Paperboard Mills	5.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03	0.00E+00	5.00E-03	5.00E-03
Photographic Equipment And Supplies	5.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03	0.00E+00	5.00E-03	5.00E-03
Radio and Television Communications Equipment (3663)	5.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03	0.00E+00	5.00E-03	5.00E-03
Storage Batteries Manufacturing	5.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03	0.00E+00	5.00E-03	5.00E-03
Upholstered Household Furniture	5.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Clay Refractories (not subject to Refractories Manufacturing MACT)	4.00E-03	< 0.01	0.00E+00	4.00E-03	0.00E+00	4.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-03

Table 6 - 18 Base Year 1990 National Emission Estimates for Chromium Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Gaskets, Packing and Sealing Devices Manufacturing	3.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-03	0.00E+00	3.50E-03	3.50E-03
Saw Blades and Handsaws	3.50E-03	< 0.01	0.00E+00	3.50E-03	0.00E+00	3.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-03
Textile Machinery	3.50E-03	< 0.01	0.00E+00	3.50E-03	0.00E+00	3.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-03
Engineering, Laboratory, Scientific and Research	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	2.50E-03
Fluid Power Cylinders and Activators	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Mineral Wool Manufacturing (not subject to Mineral Wool Production MACT)	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	2.50E-03	2.50E-03
Primary Lead Smelting	2.50E-03	< 0.01	1.66E-03	0.00E+00	0.00E+00	1.66E-03	8.31E-04	0.00E+00	0.00E+00	8.31E-04	2.49E-03
Steel Springs, Except Wire	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	2.50E-03
Surface Active Agents Manufacturing	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	2.50E-03
Hydrochloric Acid Production	1.00E-03	< 0.01	5.52E-04	8.41E-06	0.00E+00	5.61E-04	3.31E-05	5.03E-07	0.00E+00	3.36E-05	5.94E-04
Metal Can (Surface Coating)	1.00E-03	< 0.01	1.00E-03	0.00E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-03
Lime Manufacturing	5.00E-04	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Malt Beverages	5.00E-04	< 0.01	5.00E-04	0.00E+00	0.00E+00	5.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-04

**Table 6 - 19 Base Year 1990 National Emission Estimates for
Coke Oven Emissions**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	
Coke Ovens: Emergency Releases	9.37E+02	53.12	7.03E+02	0.00E+00	0.00E+00	7.03E+02	1.34E+02	0.00E+00	0.00E+00	1.34E+02	8.37E+02
Coke Ovens: Charging, Top Side, and Door Leaks	8.27E+02	46.88	6.20E+02	0.00E+00	0.00E+00	6.20E+02	1.18E+02	0.00E+00	0.00E+00	1.18E+02	7.38E+02

**Table 6 - 20 Base Year 1990 National Emission Estimates for
Dioxins/Furans as 2,3,7,8-TCDD TEQ**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Municipal Waste Combustors	1.24E-03	39.07	7.94E-04	4.18E-05	0.00E+00	8.35E-04	2.23E-04	1.17E-05	0.00E+00	2.34E-04	1.07E-03
Medical Waste Incinerators	6.57E-04	20.63	4.58E-05	2.60E-04	0.00E+00	3.06E-04	2.25E-05	1.28E-04	0.00E+00	1.50E-04	4.56E-04
Hazardous Waste Incineration	5.25E-04	16.48	2.76E-04	0.00E+00	0.00E+00	2.76E-04	1.06E-04	0.00E+00	0.00E+00	1.06E-04	3.82E-04
Secondary Aluminum Smelting	1.90E-04	5.97	1.71E-04	0.00E+00	0.00E+00	1.71E-04	7.60E-06	0.00E+00	0.00E+00	7.60E-06	1.79E-04
Utility Boilers - Coal	1.10E-04	3.45	4.24E-05	0.00E+00	0.00E+00	4.24E-05	2.78E-05	0.00E+00	0.00E+00	2.78E-05	7.02E-05
Industrial Boilers	9.84E-05	3.09	4.80E-05	1.20E-05	0.00E+00	6.00E-05	1.26E-05	3.15E-06	0.00E+00	1.57E-05	7.57E-05
Mobile Sources: On- Road Vehicles	9.50E-05	2.98	0.00E+00	0.00E+00	4.70E-05	4.70E-05	0.00E+00	0.00E+00	1.61E-05	1.61E-05	6.31E-05
Open Burning: Forest and Wildfires	5.30E-05	1.66	0.00E+00	3.18E-06	0.00E+00	3.18E-06	0.00E+00	7.95E-06	0.00E+00	7.95E-06	1.11E-05
Portland Cement, excluding hazardous waste-fired	4.74E-05	1.49	2.47E-05	2.75E-06	0.00E+00	2.75E-05	8.11E-06	9.01E-07	0.00E+00	9.01E-06	3.65E-05
Residential Heating: Wood/Wood Residue Combustion	4.23E-05	1.33	0.00E+00	2.92E-05	0.00E+00	2.92E-05	0.00E+00	6.34E-06	0.00E+00	6.34E-06	3.55E-05
Open Burning: Prescribed Burnings	4.20E-05	1.32	0.00E+00	6.30E-06	0.00E+00	6.30E-06	0.00E+00	9.24E-06	0.00E+00	9.24E-06	1.55E-05
Wood Preserving	3.80E-05	1.19	0.00E+00	1.44E-05	0.00E+00	1.44E-05	0.00E+00	7.98E-06	0.00E+00	7.98E-06	2.24E-05
Sewage Sludge Incineration	2.65E-05	0.83	0.00E+00	2.18E-05	0.00E+00	2.18E-05	0.00E+00	3.49E-06	0.00E+00	3.49E-06	2.53E-05
Secondary Copper	6.80E-06	0.21	2.75E-06	3.37E-06	0.00E+00	6.12E-06	1.22E-07	1.50E-07	0.00E+00	2.72E-07	6.39E-06
Secondary Lead Smelting	4.25E-06	0.13	2.94E-06	2.56E-07	0.00E+00	3.20E-06	6.01E-08	5.22E-09	0.00E+00	6.53E-08	3.27E-06
Institutional/Commercial Heating	3.79E-06	0.12	0.00E+00	2.95E-06	0.00E+00	2.95E-06	0.00E+00	5.35E-07	0.00E+00	5.35E-07	3.48E-06
Pulp and Paper Production (combustion) MACT II	3.42E-07	0.01	6.45E-08	0.00E+00	0.00E+00	6.45E-08	1.18E-07	0.00E+00	0.00E+00	1.18E-07	1.82E-07

**Table 6 - 20 Base Year 1990 National Emission Estimates for
Dioxins/Furans as 2,3,7,8-TCDD TEQ**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Scrap Tire Combustion	3.00E-07	0.01	1.13E-07	0.00E+00	0.00E+00	1.13E-07	1.12E-07	0.00E+00	0.00E+00	1.12E-07	2.25E-07
Drum and Barrel Reclamation	2.51E-07	0.01	0.00E+00	2.51E-07	0.00E+00	2.51E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-07
Carbon Reactivation Furnaces	1.24E-07	< 0.01	2.46E-08	7.38E-08	0.00E+00	9.84E-08	3.11E-09	9.34E-09	0.00E+00	1.24E-08	1.11E-07
Residential Heating: Bituminous and Lignite Coal Combustion	3.38E-09	< 0.01	0.00E+00	2.35E-09	0.00E+00	2.35E-09	0.00E+00	4.79E-10	0.00E+00	4.79E-10	2.82E-09
Utility Boilers - Coke	1.63E-09	< 0.01	1.22E-09	0.00E+00	0.00E+00	1.22E-09	2.33E-10	0.00E+00	0.00E+00	2.33E-10	1.46E-09
Residential Heating: Anthracite Coal Combustion	1.28E-09	< 0.01	0.00E+00	8.88E-10	0.00E+00	8.88E-10	0.00E+00	1.81E-10	0.00E+00	1.81E-10	1.07E-09

Table 6 - 21 Base Year 1990 National Emission Estimates for Ethyl Acrylate

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Polymers & Resins (I, II, and IV)	5.12E+01	32.08	2.98E+01	1.33E+01	0.00E+00	4.32E+01	7.98E+00	0.00E+00	0.00E+00	7.98E+00	5.12E+01
MON	5.08E+01	31.86	3.69E+01	3.72E-01	0.00E+00	3.72E+01	5.98E+00	6.04E-02	0.00E+00	6.04E+00	4.33E+01
Industrial Organic Chemicals Manufacturing	3.51E+01	21.99	3.40E+01	8.65E-01	0.00E+00	3.49E+01	1.92E-01	0.00E+00	0.00E+00	1.92E-01	3.51E+01
Petroleum Refining (not subject to Petroleum Refining MACT)	8.46E+00	5.30	8.46E+00	0.00E+00	0.00E+00	8.46E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.46E+00
Paints and Allied Products Manufacturing	3.45E+00	2.16	1.12E+00	6.69E-01	0.00E+00	1.79E+00	0.00E+00	6.27E-01	0.00E+00	6.27E-01	2.42E+00
Chemical Preparations	2.41E+00	1.51	1.67E+00	4.94E-01	0.00E+00	2.16E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E+00
Photographic Equipment And Supplies	1.69E+00	1.06	1.69E+00	0.00E+00	0.00E+00	1.69E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E+00
Adhesives and Sealants	1.25E+00	0.78	0.00E+00	7.50E-01	0.00E+00	7.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E-01
Industrial Inorganic Chemical Manufacturing	1.14E+00	0.71	8.91E-01	0.00E+00	0.00E+00	8.91E-01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	1.14E+00
Soap and Other Detergents Manufacturing	9.75E-01	0.61	0.00E+00	9.75E-01	0.00E+00	9.75E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.75E-01
Plastic Parts and Products (Surface Coating)	6.77E-01	0.42	6.77E-01	0.00E+00	0.00E+00	6.77E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.77E-01
Unsupported Plastics Film & Sheet	5.50E-01	0.34	5.50E-01	0.00E+00	0.00E+00	5.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.50E-01
Pharmaceuticals Production	5.45E-01	0.34	5.45E-01	0.00E+00	0.00E+00	5.45E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.45E-01
Reinforced Plastic Composites Production	5.05E-01	0.32	2.80E-01	4.22E-02	0.00E+00	3.22E-01	1.13E-01	1.71E-02	0.00E+00	1.30E-01	4.52E-01
Miscellaneous Plastics Products	3.75E-01	0.23	3.75E-01	0.00E+00	0.00E+00	3.75E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-01
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	2.25E-01	0.14	0.00E+00	2.25E-01	0.00E+00	2.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-01
Publicly Owned Treatment Works (POTW) Emissions	1.10E-01	0.07	3.03E-03	7.33E-02	0.00E+00	7.63E-02	6.18E-04	1.50E-02	0.00E+00	1.56E-02	9.19E-02

**Table 6 - 21 Base Year 1990 National Emission Estimates for
Ethyl Acrylate**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	8.35E-02	0.05	8.35E-02	0.00E+00	0.00E+00	8.35E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.35E-02
Chemicals and Allied Products, nec	1.95E-02	0.01	0.00E+00	1.95E-02	0.00E+00	1.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-02
Metal Barrels, Drums, and Pails Manufacturing	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03

Table 6 - 22 Base Year 1990 National Emission Estimates for Ethylene Dibromide

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	1.04E+01	20.58	1.02E+01	2.50E-01	0.00E+00	1.04E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E+01
Industrial Organic Chemicals Manufacturing	1.01E+01	19.88	2.50E-01	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
MON	9.72E+00	19.22	7.05E+00	7.12E-02	0.00E+00	7.12E+00	1.14E+00	1.15E-02	0.00E+00	1.15E+00	8.27E+00
Tire Production	6.85E+00	13.54	2.32E+00	2.35E-02	0.00E+00	2.35E+00	2.75E+00	2.78E-02	0.00E+00	2.78E+00	5.12E+00
Plastic Parts and Products (Surface Coating)	4.97E+00	9.84	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.97E+00	0.00E+00	0.00E+00	4.97E+00	4.97E+00
Polymers & Resins (I, II, and IV)	3.65E+00	7.22	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Industrial Inorganic Chemical Manufacturing	3.45E+00	6.82	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Petroleum Refining (not subject to Petroleum Refining MACT)	1.40E+00	2.78	1.33E+00	7.70E-02	0.00E+00	1.40E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E+00
Pharmaceuticals Production	5.00E-02	0.10	4.12E-02	1.28E-03	0.00E+00	4.25E-02	3.88E-03	1.20E-04	0.00E+00	4.00E-03	4.65E-02
Commercial Physical Research	5.00E-03	0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03

**Table 6 - 23 Base Year 1990 National Emission Estimates for
Ethylene Dichloride**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Hydrochloric Acid Production	1.14E+03	27.36	6.31E+02	9.61E+00	0.00E+00	6.41E+02	3.78E+01	5.75E-01	0.00E+00	3.83E+01	6.79E+02
Chemical Manufacturing: Trichloroethylene	6.48E+02	15.52	2.12E+02	0.00E+00	0.00E+00	2.12E+02	4.36E+02	0.00E+00	0.00E+00	4.36E+02	6.48E+02
Printing Trades Machinery Manufacturing	5.52E+02	13.23	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pulp and Paper Production (non-combustion) MACT I	4.58E+02	10.97	8.57E+01	0.00E+00	0.00E+00	8.57E+01	1.57E+02	0.00E+00	0.00E+00	1.57E+02	2.42E+02
Industrial Organic Chemicals Manufacturing	3.62E+02	8.66	2.88E+02	3.89E+00	0.00E+00	2.92E+02	5.00E+01	5.00E-01	0.00E+00	5.05E+01	3.43E+02
MON	2.51E+02	6.00	1.82E+02	1.84E+00	0.00E+00	1.84E+02	2.95E+01	2.98E-01	0.00E+00	2.98E+01	2.13E+02
Pharmaceuticals Production	2.41E+02	5.78	1.99E+02	6.15E+00	0.00E+00	2.05E+02	1.87E+01	5.79E-01	0.00E+00	1.93E+01	2.24E+02
Agricultural Chemicals and Pesticides	9.27E+01	2.22	6.58E+01	0.00E+00	0.00E+00	6.58E+01	2.69E+01	0.00E+00	0.00E+00	2.69E+01	9.27E+01
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	8.76E+01	2.10	2.91E+01	1.04E+00	0.00E+00	3.01E+01	1.47E+00	0.00E+00	0.00E+00	1.47E+00	3.16E+01
Municipal Landfills	4.70E+01	1.13	3.23E+00	2.94E+01	0.00E+00	3.26E+01	6.59E-01	6.00E+00	0.00E+00	6.66E+00	3.93E+01
Polymers & Resins (I, II, and IV)	4.58E+01	1.10	2.37E+01	0.00E+00	0.00E+00	2.37E+01	1.21E+01	9.72E+00	0.00E+00	2.19E+01	4.55E+01
Chemical Manufacturing: Methyl Chloroform	3.69E+01	0.88	2.44E+01	0.00E+00	0.00E+00	2.44E+01	1.25E+01	0.00E+00	0.00E+00	1.25E+01	3.69E+01
Miscellaneous Plastics Products	3.01E+01	0.72	3.01E+01	0.00E+00	0.00E+00	3.01E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.01E+01
Fabricated Metal Products, nec	3.00E+01	0.72	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	2.72E+01	0.65	2.60E+01	0.00E+00	0.00E+00	2.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.60E+01
Utility Boilers - Coal	2.70E+01	0.65	1.04E+01	0.00E+00	0.00E+00	1.04E+01	6.81E+00	0.00E+00	0.00E+00	6.81E+00	1.72E+01
Adhesives and Sealants	1.83E+01	0.44	1.83E+01	0.00E+00	0.00E+00	1.83E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01

Table 6 - 23 Base Year 1990 National Emission Estimates for Ethylene Dichloride

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Aerospace Industries	1.46E+01	0.35	1.46E+01	0.00E+00	0.00E+00	1.46E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E+01
Vegetable Oil Production	1.26E+01	0.30	1.24E+01	0.00E+00	0.00E+00	1.24E+01	2.55E-02	0.00E+00	0.00E+00	2.55E-02	1.24E+01
Photographic Equipment And Supplies	1.17E+01	0.28	5.00E-01	0.00E+00	0.00E+00	5.00E-01	1.12E+01	0.00E+00	0.00E+00	1.12E+01	1.17E+01
Tire Production	6.99E+00	0.17	2.37E+00	2.40E-02	0.00E+00	2.40E+00	2.81E+00	2.84E-02	0.00E+00	2.84E+00	5.23E+00
Petroleum Refining (not subject to Petroleum Refining MACT)	4.90E+00	0.12	1.63E+00	3.08E-01	0.00E+00	1.94E+00	2.96E+00	0.00E+00	0.00E+00	2.96E+00	4.90E+00
Industrial Gases Manufacturing	4.81E+00	0.12	4.81E+00	0.00E+00	0.00E+00	4.81E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.81E+00
Gasoline Distribution Stage II	4.63E+00	0.11	3.18E-01	2.89E+00	0.00E+00	3.21E+00	6.49E-02	5.91E-01	0.00E+00	6.56E-01	3.87E+00
Soap and Other Detergents Manufacturing	4.38E+00	0.10	0.00E+00	4.38E+00	0.00E+00	4.38E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.38E+00
Chemical Preparations	4.19E+00	0.10	2.19E+00	1.30E+00	0.00E+00	3.49E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.49E+00
Chemical Manufacturing: Tetrachloroethylene	4.00E+00	0.10	6.85E-01	0.00E+00	0.00E+00	6.85E-01	3.11E+00	0.00E+00	0.00E+00	3.11E+00	3.79E+00
Gasoline Distribution (Stage 1)	2.57E+00	0.06	5.27E-02	1.00E+00	0.00E+00	1.05E+00	2.96E-02	5.62E-01	0.00E+00	5.91E-01	1.64E+00
Space Propulsion Units and Parts Manufacturing	8.96E-01	0.02	8.96E-01	0.00E+00	0.00E+00	8.96E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.96E-01
Industrial Boilers	7.66E-01	0.02	4.62E-01	5.13E-02	0.00E+00	5.13E-01	1.03E-01	1.15E-02	0.00E+00	1.15E-01	6.28E-01
Consumer Products Usage	5.78E-01	0.01	0.00E+00	4.01E-01	0.00E+00	4.01E-01	0.00E+00	8.19E-02	0.00E+00	8.19E-02	4.83E-01
Plastics Foam Products Manufacturing (not subject to Plastic Parts (Surface Coating) MACT)	3.78E-01	0.01	3.78E-01	0.00E+00	0.00E+00	3.78E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.78E-01
Shipbuilding and Ship Repair (Surface Coating)	1.28E-01	< 0.01	9.54E-02	1.95E-03	0.00E+00	9.73E-02	1.85E-02	3.78E-04	0.00E+00	1.89E-02	1.16E-01
Cement, Hydraulic (not subject to Portland Cement MACT)	1.16E-01	< 0.01	0.00E+00	3.50E-02	0.00E+00	3.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-02

Table 6 - 23 Base Year 1990 National Emission Estimates for Ethylene Dichloride

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	
Institutional/Commercial Heating	8.15E-02	< 0.01	0.00E+00	6.35E-02	0.00E+00	6.35E-02	0.00E+00	1.06E-02	0.00E+00	1.06E-02	7.41E-02
Residential Heating: Bituminous and Lignite Coal Combustion	3.86E-02	< 0.01	0.00E+00	2.68E-02	0.00E+00	2.68E-02	0.00E+00	5.47E-03	0.00E+00	5.47E-03	3.22E-02
Utility Boilers - Coke	1.86E-02	< 0.01	1.39E-02	0.00E+00	0.00E+00	1.39E-02	2.66E-03	0.00E+00	0.00E+00	2.66E-03	1.66E-02
Sewage Sludge Incineration	1.53E-02	< 0.01	0.00E+00	1.26E-02	0.00E+00	1.26E-02	0.00E+00	2.02E-03	0.00E+00	2.02E-03	1.47E-02
Residential Heating: Anthracite Coal Combustion	1.46E-02	< 0.01	0.00E+00	1.01E-02	0.00E+00	1.01E-02	0.00E+00	2.07E-03	0.00E+00	2.07E-03	1.22E-02
Chemicals and Allied Products Manufacturing	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Commercial Physical Research	3.50E-03	< 0.01	0.00E+00	3.50E-03	0.00E+00	3.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-03
Space Research and Technology	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	2.50E-03
Industrial Inorganic Chemical Manufacturing	1.00E-03	< 0.01	1.00E-03	0.00E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-03

Table 6 - 24 Base Year 1990 National Emission Estimates for Ethylene Oxide

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Hospital Sterilizers	1.17E+03	45.61	0.00E+00	8.68E+02	0.00E+00	8.68E+02	0.00E+00	1.29E+02	0.00E+00	1.29E+02	9.97E+02
Commercial Sterilization Facilities	3.05E+02	11.85	1.52E+02	3.81E+01	0.00E+00	1.90E+02	1.73E+01	4.32E+00	0.00E+00	2.16E+01	2.12E+02
Industrial Organic Chemicals Manufacturing	2.91E+02	11.32	2.49E+02	1.20E+01	0.00E+00	2.61E+02	6.95E+00	2.90E+00	0.00E+00	9.84E+00	2.71E+02
Polyether Polyols Production	2.00E+02	7.78	1.30E+02	1.44E+01	0.00E+00	1.44E+02	3.42E+01	3.80E+00	0.00E+00	3.80E+01	1.82E+02
MON	1.42E+02	5.54	1.03E+02	1.04E+00	0.00E+00	1.04E+02	1.67E+01	1.69E-01	0.00E+00	1.69E+01	1.21E+02
Industrial Inorganic Chemical Manufacturing	9.08E+01	3.53	8.85E+01	0.00E+00	0.00E+00	8.85E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.85E+01
Unsupported Plastics Film & Sheet	5.56E+01	2.16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Polymers & Resins (I, II, and IV)	4.28E+01	1.66	3.90E+01	2.50E-03	0.00E+00	3.90E+01	3.78E+00	0.00E+00	0.00E+00	3.78E+00	4.28E+01
Special Industry Machinery, nec	4.15E+01	1.61	3.13E+01	1.02E+01	0.00E+00	4.15E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.15E+01
Wet Corn Milling	3.51E+01	1.37	3.31E+01	0.00E+00	0.00E+00	3.31E+01	0.00E+00	2.01E+00	0.00E+00	2.01E+00	3.51E+01
Surface Active Agents Manufacturing	2.91E+01	1.13	2.85E+00	1.17E+01	0.00E+00	1.45E+01	6.10E+00	8.41E+00	0.00E+00	1.45E+01	2.91E+01
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	2.16E+01	0.84	1.75E+01	0.00E+00	0.00E+00	1.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E+01
Electromedical Equipment Manufacturing	2.03E+01	0.79	2.03E+01	0.00E+00	0.00E+00	2.03E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E+01
Pharmaceuticals Production	1.90E+01	0.74	1.56E+01	4.84E-01	0.00E+00	1.61E+01	1.47E+00	4.55E-02	0.00E+00	1.52E+00	1.76E+01
Chemical Preparations	1.86E+01	0.72	2.75E+00	1.58E+01	0.00E+00	1.85E+01	0.00E+00	2.85E-02	0.00E+00	2.85E-02	1.86E+01
Miscellaneous Plastics Products	1.69E+01	0.66	1.69E+01	0.00E+00	0.00E+00	1.69E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E+01
Publicly Owned Treatment Works (POTW) Emissions	1.39E+01	0.54	3.84E-01	9.29E+00	0.00E+00	9.68E+00	7.84E-02	1.90E+00	0.00E+00	1.98E+00	1.17E+01

Table 6 - 24 Base Year 1990 National Emission Estimates for Ethylene Oxide

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Plastic Parts and Products (Surface Coating)	1.28E+01	0.50	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hydrochloric Acid Production	1.25E+01	0.48	6.89E+00	1.05E-01	0.00E+00	6.99E+00	4.12E-01	6.28E-03	0.00E+00	4.18E-01	7.41E+00
Gum and Wood Chemical Manufacturing	7.01E+00	0.27	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.01E+00	0.00E+00	0.00E+00	7.01E+00	7.01E+00
Toilet Preparations Manufacturing	5.80E+00	0.23	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	5.71E+00	0.22	3.32E+00	6.59E-01	0.00E+00	3.98E+00	1.95E-02	0.00E+00	0.00E+00	1.95E-02	4.00E+00
Petroleum Refining (not subject to Petroleum Refining MACT)	3.40E+00	0.13	3.40E+00	0.00E+00	0.00E+00	3.40E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.40E+00
Prepared Feeds Manufacturing	2.65E+00	0.10	0.00E+00	2.65E+00	0.00E+00	2.65E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.65E+00
Industrial Gases Manufacturing	1.84E+00	0.07	0.00E+00	1.84E+00	0.00E+00	1.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E+00
Chemicals and Allied Products Manufacturing	1.69E+00	0.07	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Surgical and Medical Instruments Manufacturing	1.03E+00	0.04	0.00E+00	1.03E+00	0.00E+00	1.03E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E+00
Soap and Other Detergents Manufacturing	3.82E-01	0.01	0.00E+00	3.82E-01	0.00E+00	3.82E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.82E-01
Vegetable Oil Production	1.25E-01	< 0.01	1.23E-01	0.00E+00	0.00E+00	1.23E-01	2.53E-04	0.00E+00	0.00E+00	2.53E-04	1.23E-01
Electronic Components, nec	4.85E-02	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E-02	0.00E+00	4.85E-02	4.85E-02
Refuse Systems	2.00E-02	< 0.01	0.00E+00	2.00E-02	0.00E+00	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02
Agricultural Chemicals and Pesticides	1.75E-02	< 0.01	0.00E+00	1.75E-02	0.00E+00	1.75E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E-02
Distilled and Blended Liquors Production	5.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03	0.00E+00	0.00E+00	5.00E-03	5.00E-03

Table 6 - 25 Base Year 1990 National Emission Estimates for Formaldehyde

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Mobile Sources: On-Road Vehicles	9.75E+04	27.81	0.00E+00	0.00E+00	4.83E+04	4.83E+04	0.00E+00	0.00E+00	1.65E+04	1.65E+04	6.48E+04
Mobile Sources: Non-Road Vehicles and Equipment - Other	7.29E+04	20.78	0.00E+00	0.00E+00	5.06E+04	5.06E+04	0.00E+00	0.00E+00	1.03E+04	1.03E+04	6.09E+04
Open Burning: Forest and Wildfires	6.82E+04	19.46	0.00E+00	4.09E+03	0.00E+00	4.09E+03	0.00E+00	1.02E+04	0.00E+00	1.02E+04	1.43E+04
Open Burning: Prescribed Burnings	5.86E+04	16.72	0.00E+00	8.79E+03	0.00E+00	8.79E+03	0.00E+00	1.29E+04	0.00E+00	1.29E+04	2.17E+04
Stationary Internal Combustion Engines	2.83E+04	8.07	1.14E+04	7.59E+03	0.00E+00	1.90E+04	2.55E+03	1.70E+03	0.00E+00	4.25E+03	2.32E+04
Mobile Sources: Non-Road Vehicles and Equipment - Aircraft	6.63E+03	1.89	0.00E+00	0.00E+00	5.72E+03	5.72E+03	0.00E+00	0.00E+00	6.99E+02	6.99E+02	6.42E+03
Pulp and Paper Production (non-combustion) MACT I	3.08E+03	0.88	5.76E+02	0.00E+00	0.00E+00	5.76E+02	1.05E+03	0.00E+00	0.00E+00	1.05E+03	1.63E+03
Structure Fires	2.22E+03	0.63	0.00E+00	1.54E+03	0.00E+00	1.54E+03	0.00E+00	3.14E+02	0.00E+00	3.14E+02	1.85E+03
Wool Fiberglass Manufacturing	1.95E+03	0.56	1.07E+03	1.08E+01	0.00E+00	1.08E+03	7.32E+02	7.40E+00	0.00E+00	7.40E+02	1.82E+03
Plywood/Particle Board Manufacturing	1.93E+03	0.55	1.50E+02	3.86E+00	0.00E+00	1.54E+02	6.04E+02	1.55E+01	0.00E+00	6.19E+02	7.74E+02
MON	1.28E+03	0.37	9.29E+02	9.39E+00	0.00E+00	9.39E+02	1.51E+02	1.52E+00	0.00E+00	1.52E+02	1.09E+03
Pulp and Paper Production (combustion) MACT II	1.04E+03	0.30	1.93E+02	0.00E+00	0.00E+00	1.93E+02	3.57E+02	0.00E+00	0.00E+00	3.57E+02	5.50E+02
Industrial Organic Chemicals Manufacturing	7.77E+02	0.22	4.99E+02	1.82E+01	0.00E+00	5.17E+02	6.25E+01	9.67E+00	0.00E+00	7.22E+01	5.89E+02
Petroleum Refineries: Catalytic Cracking (Fluid and other) Units, Catalytic Reforming Units, and Sulfur Plant Units	6.51E+02	0.19	3.95E+02	0.00E+00	0.00E+00	3.95E+02	1.63E+02	0.00E+00	0.00E+00	1.63E+02	5.58E+02
Polymers & Resins III	6.21E+02	0.18	3.36E+02	0.00E+00	0.00E+00	3.36E+02	1.24E+02	0.00E+00	0.00E+00	1.24E+02	4.60E+02
Stationary Combustion Turbines	5.43E+02	0.15	1.82E+02	1.82E+02	0.00E+00	3.64E+02	4.07E+01	4.07E+01	0.00E+00	8.15E+01	4.45E+02
Industrial Boilers	4.57E+02	0.13	2.21E+02	6.56E+01	0.00E+00	2.86E+02	5.55E+01	1.62E+01	0.00E+00	7.17E+01	3.58E+02

**Table 6 - 25 Base Year 1990 National Emission Estimates for
Formaldehyde**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Pharmaceuticals Production	3.51E+02	0.10	2.89E+02	8.95E+00	0.00E+00	2.98E+02	2.72E+01	8.43E-01	0.00E+00	2.81E+01	3.27E+02
Reconstituted Wood Products	2.76E+02	0.08	3.05E+01	9.65E+00	0.00E+00	4.02E+01	5.35E+01	0.00E+00	0.00E+00	5.35E+01	9.37E+01
Mineral Wool Manufacturing (not subject to Mineral Wool Production MACT)	2.31E+02	0.07	1.00E+02	2.02E+00	0.00E+00	1.02E+02	1.28E+02	0.00E+00	0.00E+00	1.28E+02	2.30E+02
Institutional/Commercial Heating	2.18E+02	0.06	0.00E+00	1.70E+02	0.00E+00	1.70E+02	0.00E+00	2.85E+01	0.00E+00	2.85E+01	1.98E+02
Pressed and Blown Glass and Glassware Manufacturing	2.14E+02	0.06	4.05E+01	0.00E+00	0.00E+00	4.05E+01	0.00E+00	4.75E-01	0.00E+00	4.75E-01	4.10E+01
Aerospace Industries	1.89E+02	0.05	1.67E+02	7.01E+00	0.00E+00	1.74E+02	9.07E+00	3.78E-01	0.00E+00	9.45E+00	1.83E+02
Printing, Coating, and Dyeing of Fabrics	1.87E+02	0.05	1.12E+02	1.75E+00	0.00E+00	1.14E+02	0.00E+00	2.00E+00	0.00E+00	2.00E+00	1.16E+02
Residential Heating: Natural Gas Combustion	1.61E+02	0.05	0.00E+00	1.12E+02	0.00E+00	1.12E+02	0.00E+00	2.28E+01	0.00E+00	2.28E+01	1.34E+02
Mineral Wool Production	1.59E+02	0.05	7.41E+01	0.00E+00	0.00E+00	7.41E+01	4.23E+01	0.00E+00	0.00E+00	4.23E+01	1.16E+02
Consumer Products Usage	1.57E+02	0.04	0.00E+00	1.09E+02	0.00E+00	1.09E+02	0.00E+00	2.22E+01	0.00E+00	2.22E+01	1.31E+02
Polymers & Resins (I, II, and IV)	1.41E+02	0.04	1.14E+02	1.05E+01	0.00E+00	1.25E+02	7.77E-01	5.04E+00	0.00E+00	5.82E+00	1.31E+02
Residential Heating: Wood/Wood Residue Combustion	1.39E+02	0.04	0.00E+00	9.59E+01	0.00E+00	9.59E+01	0.00E+00	2.09E+01	0.00E+00	2.09E+01	1.17E+02
Plastic Parts and Products (Surface Coating)	1.36E+02	0.04	1.15E+02	2.82E+00	0.00E+00	1.18E+02	1.50E+00	3.01E-02	0.00E+00	1.53E+00	1.19E+02
Wood Products	1.24E+02	0.04	1.01E+01	5.00E-03	0.00E+00	1.01E+01	1.11E+02	0.00E+00	0.00E+00	1.11E+02	1.21E+02
Petroleum Refining (not subject to Petroleum Refining MACT)	1.15E+02	0.03	2.18E+01	5.00E-03	0.00E+00	2.18E+01	9.34E+01	0.00E+00	0.00E+00	9.34E+01	1.15E+02
Residential Heating: Distillate Oil Combustion	1.01E+02	0.03	0.00E+00	7.01E+01	0.00E+00	7.01E+01	0.00E+00	1.43E+01	0.00E+00	1.43E+01	8.44E+01
Iron Foundries	9.44E+01	0.03	8.30E+01	3.20E-01	0.00E+00	8.33E+01	4.42E+00	1.14E+00	0.00E+00	5.57E+00	8.89E+01

**Table 6 - 25 Base Year 1990 National Emission Estimates for
Formaldehyde**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Paper Mills (not subject to Pulp and Paper MACT)	9.11E+01	0.03	5.35E+01	5.45E+00	0.00E+00	5.89E+01	0.00E+00	1.26E+01	0.00E+00	1.26E+01	7.15E+01
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	8.66E+01	0.02	1.46E+01	4.19E+00	0.00E+00	1.88E+01	6.75E+01	2.60E-02	0.00E+00	6.76E+01	8.63E+01
Softwood Drying Kilns	6.20E+01	0.02	0.00E+00	1.17E+01	0.00E+00	1.17E+01	0.00E+00	1.30E+01	0.00E+00	1.30E+01	2.48E+01
Paper and Other Webs (Surface Coating)	5.79E+01	0.02	4.41E+01	4.43E+00	0.00E+00	4.85E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E+01
Utility Boilers - Natural Gas	5.50E+01	0.02	0.00E+00	3.11E+01	0.00E+00	3.11E+01	0.00E+00	1.50E+01	0.00E+00	1.50E+01	4.62E+01
Particleboard	3.85E+01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.80E+01	5.00E-01	0.00E+00	3.85E+01	3.85E+01
Utility Boilers - Coal	3.50E+01	0.01	1.35E+01	0.00E+00	0.00E+00	1.35E+01	8.83E+00	0.00E+00	0.00E+00	8.83E+00	2.23E+01
Wood Furniture (Surface Coating)	3.07E+01	0.01	2.12E-01	3.86E+00	0.00E+00	4.07E+00	3.52E-01	1.25E-01	0.00E+00	4.77E-01	4.54E+00
Mobile Sources: Non-Road Vehicles and Equipment - Commercial Marine Vessels	2.66E+01	0.01	0.00E+00	0.00E+00	2.66E+01	2.66E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.66E+01
Miscellaneous Plastics Products	2.43E+01	0.01	0.00E+00	1.04E+01	0.00E+00	1.04E+01	1.90E+00	0.00E+00	0.00E+00	1.90E+00	1.22E+01
Chemical Preparations	2.42E+01	0.01	3.33E+00	9.67E+00	0.00E+00	1.30E+01	0.00E+00	4.30E+00	0.00E+00	4.30E+00	1.73E+01
General Industrial Machinery Manufacturing	2.25E+01	0.01	2.14E+01	1.12E+00	0.00E+00	2.25E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E+01
Municipal Waste Combustors	2.23E+01	0.01	1.42E+01	7.49E-01	0.00E+00	1.50E+01	3.99E+00	2.10E-01	0.00E+00	4.20E+00	1.92E+01
Utility Boilers - Oil	1.90E+01	0.01	1.10E+01	4.69E+00	0.00E+00	1.56E+01	1.83E+00	7.82E-01	0.00E+00	2.61E+00	1.83E+01
Agricultural Chemicals and Pesticides	1.88E+01	0.01	6.69E+00	9.28E+00	0.00E+00	1.60E+01	2.85E+00	0.00E+00	0.00E+00	2.85E+00	1.88E+01
Industrial Inorganic Chemical Manufacturing	1.86E+01	0.01	7.97E+00	3.22E+00	0.00E+00	1.12E+01	0.00E+00	4.82E-01	0.00E+00	4.82E-01	1.17E+01
Friction Products Manufacturing	1.83E+01	0.01	1.29E+01	6.80E-01	0.00E+00	1.36E+01	1.75E+00	9.20E-02	0.00E+00	1.84E+00	1.54E+01

**Table 6 - 25 Base Year 1990 National Emission Estimates for
Formaldehyde**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Asphalt Roofing Manufacturing	1.79E+01	0.01	1.76E+01	0.00E+00	0.00E+00	1.76E+01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	1.79E+01
Stainless and Non-stainless Steel Manufacture - EAF	1.78E+01	0.01	1.19E+01	1.03E+00	0.00E+00	1.30E+01	3.32E+00	3.95E-01	0.00E+00	3.71E+00	1.67E+01
Cathode Ray Television Picture Tubes Manufacturing	1.58E+01	< 0.01	9.73E+00	5.72E+00	0.00E+00	1.55E+01	3.78E-01	0.00E+00	0.00E+00	3.78E-01	1.58E+01
Surface Active Agents Manufacturing	1.52E+01	< 0.01	9.23E+00	4.18E+00	0.00E+00	1.34E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E+01
Refractories Manufacturing	1.40E+01	< 0.01	6.41E+00	1.13E+00	0.00E+00	7.54E+00	2.16E+00	3.82E-01	0.00E+00	2.55E+00	1.01E+01
Photographic Equipment And Supplies	1.24E+01	< 0.01	4.82E+00	6.22E-01	0.00E+00	5.44E+00	7.01E+00	0.00E+00	0.00E+00	7.01E+00	1.24E+01
Misc. Nonmetallic Mineral Products	1.20E+01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Primary Battery, Dry and Wet Manufacture	1.07E+01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+01	0.00E+00	0.00E+00	1.07E+01	1.07E+01
Steel Foundries	1.03E+01	< 0.01	0.00E+00	1.03E+01	0.00E+00	1.03E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E+01
Softwood Veneer and Plywood	9.46E+00	< 0.01	0.00E+00	2.80E-01	0.00E+00	2.80E-01	0.00E+00	7.52E+00	0.00E+00	7.52E+00	7.80E+00
Nitrogenous Fertilizers	9.44E+00	< 0.01	9.20E-01	3.85E-01	0.00E+00	1.30E+00	7.03E+00	2.50E-03	0.00E+00	7.03E+00	8.33E+00
Wood Preserving	9.38E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.38E+00	0.00E+00	9.38E+00	9.38E+00
Secondary Lead Smelting	9.03E+00	< 0.01	6.26E+00	5.44E-01	0.00E+00	6.80E+00	1.28E-01	1.11E-02	0.00E+00	1.39E-01	6.94E+00
Tire Cord And Fabrics	8.93E+00	< 0.01	7.50E+00	0.00E+00	0.00E+00	7.50E+00	2.50E-03	0.00E+00	0.00E+00	2.50E-03	7.50E+00
Burial Caskets	8.90E+00	< 0.01	8.90E+00	0.00E+00	0.00E+00	8.90E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.90E+00
Plating And Polishing	7.63E+00	< 0.01	6.51E+00	3.78E-01	0.00E+00	6.89E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.89E+00
Blowers and Fans	7.63E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.63E+00	0.00E+00	7.63E+00	7.63E+00

**Table 6 - 25 Base Year 1990 National Emission Estimates for
Formaldehyde**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Printing/Publishing (Surface Coating)	7.29E+00	< 0.01	7.29E+00	0.00E+00	0.00E+00	7.29E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.29E+00
Paper Coating and Glazing Manufacturing	7.27E+00	< 0.01	6.35E+00	0.00E+00	0.00E+00	6.35E+00	0.00E+00	9.17E-01	0.00E+00	9.17E-01	7.27E+00
Fabricated Textile Products, nec	5.50E+00	< 0.01	0.00E+00	5.50E+00	0.00E+00	5.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.50E+00
Paints and Allied Products Manufacturing	5.09E+00	< 0.01	2.46E+00	1.65E+00	0.00E+00	4.11E+00	0.00E+00	2.50E-01	0.00E+00	2.50E-01	4.36E+00
Industrial Gases Manufacturing	5.05E+00	< 0.01	5.05E+00	0.00E+00	0.00E+00	5.05E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.05E+00
Beet Sugar	5.00E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.52E+00	1.35E-01	0.00E+00	2.66E+00	2.66E+00
Telephone and Telegraph Apparatus	4.29E+00	< 0.01	4.29E+00	0.00E+00	0.00E+00	4.29E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.29E+00
Fertilizers, Mixing only	4.15E+00	< 0.01	0.00E+00	4.02E+00	0.00E+00	4.02E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	4.15E+00
Instruments to Measure Electricity	3.95E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.95E+00	0.00E+00	3.95E+00	3.95E+00
Leather Tanning and Finishing Operations	3.95E+00	< 0.01	1.89E+00	2.10E-01	0.00E+00	2.10E+00	2.99E-04	3.33E-05	0.00E+00	3.33E-04	2.10E+00
Hydrochloric Acid Production	3.85E+00	< 0.01	2.13E+00	3.24E-02	0.00E+00	2.16E+00	1.27E-01	1.94E-03	0.00E+00	1.29E-01	2.29E+00
Pulp mills (not subject to Pulp and Paper MACT)	3.77E+00	< 0.01	1.77E+00	0.00E+00	0.00E+00	1.77E+00	2.00E+00	0.00E+00	0.00E+00	2.00E+00	3.77E+00
Hardwood Veneer and Plywood	3.41E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sawmills and Planing Mills, general	2.91E+00	< 0.01	0.00E+00	3.75E-01	0.00E+00	3.75E-01	0.00E+00	8.00E-01	0.00E+00	8.00E-01	1.18E+00
Metal Barrels, Drums, and Pails Manufacturing	2.87E+00	< 0.01	2.54E+00	3.31E-01	0.00E+00	2.87E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.87E+00
Household Audio and Video Equipment	2.20E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E+00	0.00E+00	0.00E+00	2.20E+00	2.20E+00
Tires and Inner Tubes (not subject to Tire Production MACT)	2.04E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E+00	0.00E+00	1.65E+00	1.65E+00

**Table 6 - 25 Base Year 1990 National Emission Estimates for
Formaldehyde**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Gum and Wood Chemical Manufacturing	1.88E+00	< 0.01	2.89E-01	0.00E+00	0.00E+00	2.89E-01	0.00E+00	9.53E-01	0.00E+00	9.53E-01	1.24E+00
Electronic Components, nec	1.65E+00	< 0.01	4.27E-01	1.23E+00	0.00E+00	1.65E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E+00
Medical Waste Incinerators	1.38E+00	< 0.01	9.63E-02	5.46E-01	0.00E+00	6.42E-01	4.73E-02	2.68E-01	0.00E+00	3.15E-01	9.57E-01
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	1.37E+00	< 0.01	1.16E+00	1.28E-01	0.00E+00	1.29E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E+00
Publicly Owned Treatment Works (POTW) Emissions	1.24E+00	< 0.01	3.42E-02	8.26E-01	0.00E+00	8.60E-01	6.97E-03	1.69E-01	0.00E+00	1.76E-01	1.04E+00
Nonferrous Die-castings, Except Aluminum	1.18E+00	< 0.01	0.00E+00	1.18E+00	0.00E+00	1.18E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E+00
Metal Coil (Surface Coating)	1.07E+00	< 0.01	4.74E-01	3.57E-02	0.00E+00	5.10E-01	2.85E-01	2.14E-02	0.00E+00	3.06E-01	8.17E-01
Soap and Other Detergents Manufacturing	1.04E+00	< 0.01	0.00E+00	7.57E-01	0.00E+00	7.57E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.57E-01
Primary Metal Products Manufacturing	9.27E-01	< 0.01	9.27E-01	0.00E+00	0.00E+00	9.27E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.27E-01
Adhesives and Sealants	8.32E-01	< 0.01	0.00E+00	8.32E-01	0.00E+00	8.32E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.32E-01
Metal Furniture (Surface Coating)	7.85E-01	< 0.01	0.00E+00	2.85E-01	0.00E+00	2.85E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.85E-01
Metal Stampings Manufacturing	7.25E-01	< 0.01	0.00E+00	7.25E-01	0.00E+00	7.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.25E-01
Hand and Edge Tools Manufacturing	6.25E-01	< 0.01	2.50E-01	3.75E-01	0.00E+00	6.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.25E-01
Sewage Sludge Incineration	5.69E-01	< 0.01	0.00E+00	4.69E-01	0.00E+00	4.69E-01	0.00E+00	7.51E-02	0.00E+00	7.51E-02	5.44E-01
Millwork, Plywood, and Structural Members	5.50E-01	< 0.01	0.00E+00	5.50E-01	0.00E+00	5.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.50E-01
Large Appliance (Surface Coating)	5.13E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chemicals and Allied Products Manufacturing	4.75E-01	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03

**Table 6 - 25 Base Year 1990 National Emission Estimates for
Formaldehyde**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Hardware Manufacturing	4.46E-01	< 0.01	0.00E+00	4.45E-01	0.00E+00	4.45E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.45E-01
Polishes and Sanitation Goods Manufacturing	3.92E-01	< 0.01	0.00E+00	1.45E-02	0.00E+00	1.45E-02	1.00E-03	2.86E-01	0.00E+00	2.87E-01	3.02E-01
Food Preparations Production	3.75E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-01	0.00E+00	3.75E-01	3.75E-01
Inorganic Pigments Manufacturing	2.63E-01	< 0.01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Fabricated Rubber Products, nec	2.57E-01	< 0.01	2.00E-03	1.30E-01	0.00E+00	1.32E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-01
Brooms and Brushes	2.50E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01	0.00E+00	2.50E-01	2.50E-01
Custom Compound Purchased Resins Manufacturing	2.50E-01	< 0.01	2.50E-01	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Drapery Hardware and Blinds and Shades	2.50E-01	< 0.01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Machine tools, Metal Cutting Types	2.50E-01	< 0.01	2.50E-01	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Metal coating and allied services (3479)	2.50E-01	< 0.01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Miscellaneous Fabricated Wire Products	2.50E-01	< 0.01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Nonferrous Rolling and Drawing	2.50E-01	< 0.01	2.50E-01	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Soaps, Cleaners, and Toilet Goods	2.50E-01	< 0.01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Residential Heating: Bituminous and Lignite Coal Combustion	2.32E-01	< 0.01	0.00E+00	1.61E-01	0.00E+00	1.61E-01	0.00E+00	3.29E-02	0.00E+00	3.29E-02	1.94E-01
Lawn and Garden Equipment	2.08E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E-01	0.00E+00	2.08E-01	2.08E-01
Secondary Aluminum Smelting	1.93E-01	< 0.01	1.74E-01	0.00E+00	0.00E+00	1.74E-01	7.72E-03	0.00E+00	0.00E+00	7.72E-03	1.81E-01
Commercial Physical Research	1.60E-01	< 0.01	0.00E+00	1.60E-01	0.00E+00	1.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-01

**Table 6 - 25 Base Year 1990 National Emission Estimates for
Formaldehyde**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Power Driven Handtools	1.33E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Engineering, Laboratory, Scientific and Research	1.28E-01	< 0.01	0.00E+00	1.28E-01	0.00E+00	1.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01
Manufacturing Industries, nec	1.28E-01	< 0.01	0.00E+00	1.28E-01	0.00E+00	1.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01
Relays and Industrial Controls	1.28E-01	< 0.01	1.28E-01	0.00E+00	0.00E+00	1.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01
Chemicals and Allied Products, nec	1.26E-01	< 0.01	0.00E+00	1.00E-03	0.00E+00	1.00E-03	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.26E-01
Footwear Cut Stock	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Metal Services, nec	1.25E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.25E-01
Motor and Generators Manufacturing	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Partitions And Fixtures	1.25E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Poultry Slaughtering and Processing	1.25E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.25E-01
Space Research and Technology	1.25E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.25E-01
Utility Boilers - Coke	1.11E-01	< 0.01	8.32E-02	0.00E+00	0.00E+00	8.32E-02	1.59E-02	0.00E+00	0.00E+00	1.59E-02	9.91E-02
Residential Heating: Anthracite Coal Combustion	8.78E-02	< 0.01	0.00E+00	6.09E-02	0.00E+00	6.09E-02	0.00E+00	1.24E-02	0.00E+00	1.24E-02	7.33E-02
Metal Can (Surface Coating)	1.95E-02	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-02	0.00E+00	0.00E+00	1.95E-02	1.95E-02
Taconite Iron Ore Processing	9.61E-03	< 0.01	4.80E-04	5.87E-04	0.00E+00	1.07E-03	3.36E-03	4.11E-03	0.00E+00	7.47E-03	8.54E-03
Clay Products Manufacturing	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Cement, Hydraulic (not subject to Portland Cement MACT)	2.00E-03	< 0.01	0.00E+00	2.00E-03	0.00E+00	2.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-03

**Table 6 - 25 Base Year 1990 National Emission Estimates for
Formaldehyde**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	
Toilet Preparations Manufacturing	5.00E-04	< 0.01	0.00E+00	5.00E-04	0.00E+00	5.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-04
Animal Cremation	1.16E-07	< 0.01	0.00E+00	6.73E-08	0.00E+00	6.73E-08	0.00E+00	1.86E-08	0.00E+00	1.86E-08	8.58E-08
Human Cremation	3.98E-08	< 0.01	0.00E+00	2.76E-08	0.00E+00	2.76E-08	0.00E+00	5.64E-09	0.00E+00	5.64E-09	3.32E-08

**Table 6 - 26 Base Year 1990 National Emission Estimates for
Hydrazine**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Industrial Inorganic Chemical Manufacturing	6.32E+00	32.13	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
MON	5.13E+00	26.06	3.72E+00	3.76E-02	0.00E+00	3.76E+00	6.03E-01	6.09E-03	0.00E+00	6.09E-01	4.37E+00
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	2.81E+00	14.27	1.85E+00	3.00E-02	0.00E+00	1.88E+00	9.27E-01	0.00E+00	0.00E+00	9.27E-01	2.81E+00
Industrial Organic Chemicals Manufacturing	2.69E+00	13.68	2.18E+00	5.05E-01	0.00E+00	2.69E+00	5.00E-03	0.00E+00	0.00E+00	5.00E-03	2.69E+00
Primary Metal Products Manufacturing	5.00E-01	2.54	5.00E-01	0.00E+00	0.00E+00	5.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-01
Petroleum Refining (not subject to Petroleum Refining MACT)	4.77E-01	2.42	4.77E-01	0.00E+00	0.00E+00	4.77E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.77E-01
Chemicals and Allied Products Manufacturing	4.32E-01	2.20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Polymers & Resins (I, II, and IV)	4.15E-01	2.11	1.56E-01	9.50E-03	0.00E+00	1.66E-01	2.50E-01	0.00E+00	0.00E+00	2.50E-01	4.16E-01
Agricultural Chemicals and Pesticides	4.00E-01	2.03	2.70E-01	1.30E-01	0.00E+00	3.99E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.99E-01
Aerospace Industries	2.50E-01	1.27	2.50E-01	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Space Propulsion Units and Parts Manufacturing	1.28E-01	0.65	1.28E-01	0.00E+00	0.00E+00	1.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01
Pharmaceuticals Production	7.00E-02	0.36	5.77E-02	1.78E-03	0.00E+00	5.95E-02	5.43E-03	1.68E-04	0.00E+00	5.60E-03	6.51E-02
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	3.90E-02	0.20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-02	0.00E+00	0.00E+00	3.75E-02	3.75E-02
Chemical Preparations	1.30E-02	0.07	0.00E+00	1.30E-02	0.00E+00	1.30E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-02
Guided Missiles and Space Vehicles Manufacturing	5.00E-03	0.03	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03

Table 6 - 27 Base Year 1990 National Emission Estimates for Lead Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Mobile Sources: Non-Road Vehicles and Equipment - Aircraft	6.19E+02	18.93	0.00E+00	0.00E+00	5.35E+02	5.35E+02	0.00E+00	0.00E+00	6.53E+01	6.53E+01	6.00E+02
Mobile Sources: On- Road Vehicles	4.21E+02	12.87	0.00E+00	0.00E+00	2.08E+02	2.08E+02	0.00E+00	0.00E+00	7.14E+01	7.14E+01	2.80E+02
Primary Lead Smelting	2.20E+02	6.73	1.46E+02	0.00E+00	0.00E+00	1.46E+02	7.32E+01	0.00E+00	0.00E+00	7.32E+01	2.20E+02
Steel Wire and Related Products Manufacturing	1.63E+02	4.98	1.61E+02	9.54E-01	0.00E+00	1.62E+02	4.18E-01	2.89E-01	0.00E+00	7.07E-01	1.63E+02
Mobile Sources: Non-Road Vehicles and Equipment - Other	1.58E+02	4.83	0.00E+00	0.00E+00	1.10E+02	1.10E+02	0.00E+00	0.00E+00	2.24E+01	2.24E+01	1.32E+02
Primary Copper Smelting	1.52E+02	4.66	1.85E+01	6.85E+00	0.00E+00	2.54E+01	6.22E+01	2.30E+01	0.00E+00	8.52E+01	1.11E+02
Pulp and Paper Production (combustion) MACT II	1.50E+02	4.59	2.77E+01	0.00E+00	0.00E+00	2.77E+01	5.14E+01	0.00E+00	0.00E+00	5.14E+01	7.91E+01
Lead Oxide in Pigments	1.36E+02	4.16	7.62E+01	0.00E+00	0.00E+00	7.62E+01	3.13E+01	0.00E+00	0.00E+00	3.13E+01	1.07E+02
Secondary Lead Smelting	1.13E+02	3.46	7.83E+01	6.81E+00	0.00E+00	8.51E+01	1.60E+00	1.39E-01	0.00E+00	1.74E+00	8.68E+01
Hazardous Waste Incineration	9.67E+01	2.96	5.09E+01	0.00E+00	0.00E+00	5.09E+01	1.95E+01	0.00E+00	0.00E+00	1.95E+01	7.04E+01
Stainless and Non-stainless Steel Manufacture - EAF	8.40E+01	2.57	5.63E+01	4.84E+00	0.00E+00	6.12E+01	1.57E+01	1.86E+00	0.00E+00	1.75E+01	7.87E+01
Municipal Waste Combustors	8.04E+01	2.46	5.13E+01	2.70E+00	0.00E+00	5.40E+01	1.44E+01	7.57E-01	0.00E+00	1.51E+01	6.91E+01
Secondary Copper	7.50E+01	2.29	3.04E+01	3.71E+01	0.00E+00	6.75E+01	1.35E+00	1.65E+00	0.00E+00	3.00E+00	7.05E+01
Utility Boilers - Coal	7.20E+01	2.20	2.78E+01	0.00E+00	0.00E+00	2.78E+01	1.82E+01	0.00E+00	0.00E+00	1.82E+01	4.59E+01
Medical Waste Incinerators	6.31E+01	1.93	4.40E+00	2.50E+01	0.00E+00	2.94E+01	2.16E+00	1.23E+01	0.00E+00	1.44E+01	4.38E+01
Secondary Nonferrous Metals Production	5.58E+01	1.71	3.02E+01	1.86E+01	0.00E+00	4.88E+01	0.00E+00	1.84E+00	0.00E+00	1.84E+00	5.07E+01
Storage Batteries Manufacturing	5.47E+01	1.67	5.32E+00	3.07E+01	0.00E+00	3.60E+01	0.00E+00	1.19E+01	0.00E+00	1.19E+01	4.79E+01

Table 6 - 27 Base Year 1990 National Emission Estimates for Lead Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	
Pressed and Blown Glass and Glassware Manufacturing	5.24E+01	1.60	1.49E+01	2.32E+01	0.00E+00	3.81E+01	0.00E+00	7.83E+00	0.00E+00	7.83E+00	4.60E+01
Autobody Refinishing Paint Shop	4.49E+01	1.37	8.20E+00	2.46E+01	0.00E+00	3.28E+01	1.46E+00	4.38E+00	0.00E+00	5.84E+00	3.86E+01
Primary Nonferrous Metals Production	3.99E+01	1.22	3.41E+01	1.24E+00	0.00E+00	3.54E+01	2.50E-01	4.15E+00	0.00E+00	4.40E+00	3.98E+01
Sewage Sludge Incineration	3.22E+01	0.99	0.00E+00	2.66E+01	0.00E+00	2.66E+01	0.00E+00	4.25E+00	0.00E+00	4.25E+00	3.08E+01
Industrial Boilers	2.79E+01	0.85	1.45E+01	3.14E+00	0.00E+00	1.76E+01	3.58E+00	7.85E-01	0.00E+00	4.36E+00	2.20E+01
Blast Furnaces and Steel Mills	2.35E+01	0.72	1.32E+01	8.02E+00	0.00E+00	2.12E+01	7.27E-01	7.10E-01	0.00E+00	1.44E+00	2.27E+01
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	2.29E+01	0.70	2.22E+01	6.04E-01	0.00E+00	2.28E+01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	2.29E+01
Petroleum Refineries: Catalytic Cracking (Fluid and other) Units, Catalytic Reforming Units, and Sulfur Plant Units	1.94E+01	0.59	1.18E+01	0.00E+00	0.00E+00	1.18E+01	4.85E+00	0.00E+00	0.00E+00	4.85E+00	1.66E+01
Plastic Parts and Products (Surface Coating)	1.89E+01	0.58	6.87E+00	3.92E+00	0.00E+00	1.08E+01	1.50E+00	3.23E+00	0.00E+00	4.73E+00	1.55E+01
Paints and Allied Products Manufacturing	1.80E+01	0.55	6.38E+00	9.08E+00	0.00E+00	1.55E+01	7.65E-02	1.67E+00	0.00E+00	1.75E+00	1.72E+01
Secondary Aluminum Smelting	1.50E+01	0.46	1.35E+01	0.00E+00	0.00E+00	1.35E+01	6.00E-01	0.00E+00	0.00E+00	6.00E-01	1.41E+01
Clay Products Manufacturing	1.43E+01	0.44	0.00E+00	8.52E+00	0.00E+00	8.52E+00	1.25E-01	3.21E+00	0.00E+00	3.34E+00	1.19E+01
Inorganic Pigments Manufacturing	1.35E+01	0.41	2.30E-01	1.30E+01	0.00E+00	1.32E+01	0.00E+00	2.62E-01	0.00E+00	2.62E-01	1.35E+01
Fabricated Structural Metal Manufacturing	1.26E+01	0.38	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Iron Foundries	1.23E+01	0.38	3.32E+00	1.94E+00	0.00E+00	5.26E+00	1.45E-01	5.12E+00	0.00E+00	5.26E+00	1.05E+01
Utility Boilers - Oil	1.06E+01	0.32	6.11E+00	2.62E+00	0.00E+00	8.73E+00	1.02E+00	4.36E-01	0.00E+00	1.45E+00	1.02E+01
Residential Heating: Wood/Wood Residue Combustion	7.61E+00	0.23	0.00E+00	5.25E+00	0.00E+00	5.25E+00	0.00E+00	1.14E+00	0.00E+00	1.14E+00	6.39E+00

Table 6 - 27 Base Year 1990 National Emission Estimates for Lead Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Copper Foundries	7.45E+00	0.23	1.00E-02	8.90E-01	0.00E+00	9.00E-01	0.00E+00	5.67E+00	0.00E+00	5.67E+00	6.57E+00
Integrated Iron and Steel Manufacturing	6.89E+00	0.21	6.21E+00	0.00E+00	0.00E+00	6.21E+00	6.79E-01	0.00E+00	0.00E+00	6.79E-01	6.89E+00
Fabricated Metal Products, nec	6.54E+00	0.20	2.94E+00	3.14E+00	0.00E+00	6.08E+00	0.00E+00	5.00E-03	0.00E+00	5.00E-03	6.09E+00
Nonferrous Foundries, nec	6.36E+00	0.19	1.46E-01	4.98E+00	0.00E+00	5.13E+00	0.00E+00	8.75E-01	0.00E+00	8.75E-01	6.00E+00
Metal Can (Surface Coating)	6.16E+00	0.19	2.58E-01	2.73E+00	0.00E+00	2.98E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	3.11E+00
Institutional/Commercial Heating	5.79E+00	0.18	0.00E+00	4.51E+00	0.00E+00	4.51E+00	0.00E+00	7.60E-01	0.00E+00	7.60E-01	5.27E+00
Custom Compound Purchased Resins Manufacturing	5.76E+00	0.18	0.00E+00	5.10E+00	0.00E+00	5.10E+00	0.00E+00	2.73E-01	0.00E+00	2.73E-01	5.37E+00
Primary Copper (not subject to Primary Copper Smelting MACT)	5.41E+00	0.17	0.00E+00	4.54E+00	0.00E+00	4.54E+00	0.00E+00	8.75E-01	0.00E+00	8.75E-01	5.41E+00
MON	5.27E+00	0.16	3.61E+00	3.22E-01	0.00E+00	3.94E+00	5.86E-01	5.92E-03	0.00E+00	5.92E-01	4.53E+00
Brass, Bronze, Copper, Copper Base Alloy Foundries	4.90E+00	0.15	3.00E-03	2.51E+00	0.00E+00	2.51E+00	0.00E+00	2.50E-01	0.00E+00	2.50E-01	2.76E+00
Petroleum Refining (not subject to Petroleum Refining MACT)	4.87E+00	0.15	1.94E+00	1.52E+00	0.00E+00	3.46E+00	1.28E+00	0.00E+00	0.00E+00	1.28E+00	4.74E+00
Copper Rolling and Drawing	4.50E+00	0.14	6.55E-01	1.06E+00	0.00E+00	1.71E+00	0.00E+00	6.25E-01	0.00E+00	6.25E-01	2.34E+00
Nonferrous Wire Drawing and Insulating	4.46E+00	0.14	3.60E-02	3.18E+00	0.00E+00	3.22E+00	5.00E-03	2.57E-01	0.00E+00	2.62E-01	3.48E+00
Rubber and Plastic Hose and Belting Manufacturing	4.34E+00	0.13	0.00E+00	1.25E-01	0.00E+00	1.25E-01	4.51E-01	5.00E-03	0.00E+00	4.56E-01	5.81E-01
Glass Containers	4.33E+00	0.13	0.00E+00	4.33E+00	0.00E+00	4.33E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.33E+00
Plumbing Fixture Fittings and Trim	4.29E+00	0.13	2.60E-02	1.86E+00	0.00E+00	1.89E+00	5.78E-01	1.45E+00	0.00E+00	2.03E+00	3.91E+00
Valves and Pipe Fittings Manufacturing	4.03E+00	0.12	1.52E+00	8.77E-01	0.00E+00	2.40E+00	0.00E+00	8.49E-01	0.00E+00	8.49E-01	3.25E+00

Table 6 - 27 Base Year 1990 National Emission Estimates for Lead Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Industrial Inorganic Chemical Manufacturing	4.01E+00	0.12	0.00E+00	3.47E+00	0.00E+00	3.47E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	3.47E+00
Residential Heating: Distillate Oil Combustion	3.81E+00	0.12	0.00E+00	2.64E+00	0.00E+00	2.64E+00	0.00E+00	5.39E-01	0.00E+00	5.39E-01	3.18E+00
Aluminum Foundries	3.47E+00	0.11	0.00E+00	2.04E+00	0.00E+00	2.04E+00	0.00E+00	1.43E+00	0.00E+00	1.43E+00	3.47E+00
Primary Smelting and Refining of Zinc	3.06E+00	0.09	0.00E+00	1.82E+00	0.00E+00	1.82E+00	0.00E+00	1.25E+00	0.00E+00	1.25E+00	3.06E+00
Internal Combustion Engine Manufacturing	2.89E+00	0.09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.89E+00	0.00E+00	0.00E+00	2.89E+00	2.89E+00
Prefabricated Metal Buildings	2.50E+00	0.08	0.00E+00	2.50E+00	0.00E+00	2.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E+00
Printing Ink	2.16E+00	0.07	1.43E+00	7.32E-01	0.00E+00	2.16E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E+00
Electric Lamps	2.15E+00	0.07	5.00E-03	1.14E+00	0.00E+00	1.15E+00	1.28E-01	6.25E-01	0.00E+00	7.52E-01	1.90E+00
Primary Metal Products Manufacturing	2.04E+00	0.06	0.00E+00	1.98E+00	0.00E+00	1.98E+00	0.00E+00	4.55E-02	0.00E+00	4.55E-02	2.02E+00
Products of Purchased Glass	1.88E+00	0.06	2.50E-01	5.03E-01	0.00E+00	7.53E-01	3.75E-01	2.50E-01	0.00E+00	6.25E-01	1.38E+00
Steel Pipe and Tubes Manufacturing	1.76E+00	0.05	3.80E-01	2.50E-01	0.00E+00	6.30E-01	5.00E-03	6.25E-01	0.00E+00	6.30E-01	1.26E+00
Small Arms	1.70E+00	0.05	1.05E+00	2.68E-01	0.00E+00	1.32E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.45E+00
Polymers & Resins (I, II, and IV)	1.57E+00	0.05	1.99E-01	1.24E+00	0.00E+00	1.43E+00	5.00E-04	0.00E+00	0.00E+00	5.00E-04	1.44E+00
Engine Electric Equipment	1.52E+00	0.05	2.66E-01	1.25E-01	0.00E+00	3.91E-01	3.77E-01	1.27E-01	0.00E+00	5.05E-01	8.96E-01
Agricultural Chemicals and Pesticides	1.38E+00	0.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E+00	0.00E+00	1.38E+00	1.38E+00
Industrial Organic Chemicals Manufacturing	1.36E+00	0.04	2.50E-01	1.09E+00	0.00E+00	1.34E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E+00
Primary Aluminum Production	1.29E+00	0.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 6 - 27 Base Year 1990 National Emission Estimates for Lead Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Noncurrent-Carrying Wiring Devices	1.26E+00	0.04	0.00E+00	8.75E-01	0.00E+00	8.75E-01	3.88E-01	0.00E+00	0.00E+00	3.88E-01	1.26E+00
Steel Foundries	1.23E+00	0.04	0.00E+00	9.80E-01	0.00E+00	9.80E-01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	1.23E+00
Mobile Sources: Non-Road Vehicles and Equipment - Commercial Marine Vessels	1.22E+00	0.04	0.00E+00	0.00E+00	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E+00
Metal Heat Treating Manufacturing	1.22E+00	0.04	0.00E+00	9.95E-01	0.00E+00	9.95E-01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.12E+00
Cathode Ray Television Picture Tubes Manufacturing	1.20E+00	0.04	1.73E-01	3.98E-01	0.00E+00	5.71E-01	3.78E-01	5.00E-03	0.00E+00	3.83E-01	9.53E-01
Electrometallurgical Products Manufacturing	1.17E+00	0.04	6.51E-01	0.00E+00	0.00E+00	6.51E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.51E-01
Chemical Preparations	1.17E+00	0.04	0.00E+00	1.04E+00	0.00E+00	1.04E+00	0.00E+00	1.28E-01	0.00E+00	1.28E-01	1.17E+00
Metal Sanitary Ware Manufacturing	1.15E+00	0.04	0.00E+00	3.78E-01	0.00E+00	3.78E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.78E-01
Small Arms Ammunition	1.11E+00	0.03	8.87E-01	5.00E-03	0.00E+00	8.92E-01	2.10E-01	3.50E-03	0.00E+00	2.13E-01	1.11E+00
Construction Machinery Manufacturing	1.09E+00	0.03	2.57E-01	2.50E-03	0.00E+00	2.59E-01	7.92E-01	4.20E-02	0.00E+00	8.34E-01	1.09E+00
Aerospace Industries	8.69E-01	0.03	2.61E-01	1.30E-01	0.00E+00	3.92E-01	1.25E-01	2.00E-05	0.00E+00	1.26E-01	5.17E-01
Electronic Components, nec	8.57E-01	0.03	3.85E-01	4.67E-01	0.00E+00	8.52E-01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	8.57E-01
Coke By-Product Plants	8.50E-01	0.03	6.37E-01	0.00E+00	0.00E+00	6.37E-01	1.21E-01	0.00E+00	0.00E+00	1.21E-01	7.59E-01
Drum and Barrel Reclamation	8.10E-01	0.02	0.00E+00	8.10E-01	0.00E+00	8.10E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.10E-01
Automotive stampings	7.55E-01	0.02	0.00E+00	3.80E-01	0.00E+00	3.80E-01	2.50E-01	1.25E-01	0.00E+00	3.75E-01	7.55E-01
Metal Stampings Manufacturing	7.50E-01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-01	0.00E+00	0.00E+00	5.00E-01	5.00E-01
Aluminum Foundries (Castings)	7.33E-01	0.02	0.00E+00	1.33E-01	0.00E+00	1.33E-01	0.00E+00	6.00E-01	0.00E+00	6.00E-01	7.32E-01

Table 6 - 27 Base Year 1990 National Emission Estimates for Lead Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Plating And Polishing	6.87E-01	0.02	1.50E-02	2.65E-01	0.00E+00	2.80E-01	0.00E+00	1.28E-01	0.00E+00	1.28E-01	4.08E-01
Nonferrous Rolling and Drawing	6.77E-01	0.02	0.00E+00	6.77E-01	0.00E+00	6.77E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.77E-01
Reinforced Plastic Composites Production	6.29E-01	0.02	3.49E-01	5.26E-02	0.00E+00	4.01E-01	1.41E-01	2.13E-02	0.00E+00	1.62E-01	5.64E-01
Manufacturing Industries, nec	6.27E-01	0.02	2.50E-01	3.78E-01	0.00E+00	6.27E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.27E-01
Household Audio and Video Equipment	6.25E-01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	2.50E-01	2.50E-01
Nonferrous Die-castings, Except Aluminum	6.25E-01	0.02	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	3.75E-01	0.00E+00	3.75E-01	6.25E-01
Pumps and Pumping Equipment Manufacturing	5.47E-01	0.02	0.00E+00	5.30E-01	0.00E+00	5.30E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.30E-01
Fabricated Rubber Products, nec	5.32E-01	0.02	2.50E-03	5.03E-01	0.00E+00	5.05E-01	0.00E+00	2.70E-02	0.00E+00	2.70E-02	5.32E-01
Large Appliance (Surface Coating)	5.30E-01	0.02	2.77E-01	2.50E-01	0.00E+00	5.27E-01	2.50E-03	0.00E+00	0.00E+00	2.50E-03	5.30E-01
Farm Machinery and Equipment Manufacturing	5.05E-01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.05E-01	0.00E+00	0.00E+00	5.05E-01	5.05E-01
Ammunition, Except for Small Arms	5.00E-01	0.02	2.50E-01	2.50E-01	0.00E+00	5.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-01
Carburetors, Pistons, Rings and Valves Manufacturing	5.00E-01	0.02	0.00E+00	5.00E-01	0.00E+00	5.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-01
Lubricating Oils and Greases	5.00E-01	0.02	2.50E-01	1.25E-01	0.00E+00	3.75E-01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	5.00E-01
Oil and Gas Field Machinery Manufacturing	5.00E-01	0.02	3.75E-01	1.25E-01	0.00E+00	5.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-01
Paper and Other Webs (Surface Coating)	5.00E-01	0.02	0.00E+00	3.75E-01	0.00E+00	3.75E-01	1.25E-01	0.00E+00	0.00E+00	1.25E-01	5.00E-01
Radio and Television Communications Equipment (3662)	5.00E-01	0.02	0.00E+00	5.00E-01	0.00E+00	5.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-01
Tire Production	4.99E-01	0.02	1.69E-01	1.71E-03	0.00E+00	1.71E-01	2.00E-01	2.02E-03	0.00E+00	2.02E-01	3.73E-01

Table 6 - 27 Base Year 1990 National Emission Estimates for Lead Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Metal Barrels, Drums, and Pails Manufacturing	4.95E-01	0.02	0.00E+00	4.95E-01	0.00E+00	4.95E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.95E-01
Asphalt Concrete Manufacturing	4.90E-01	0.01	0.00E+00	4.90E-01	0.00E+00	4.90E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.90E-01
Stationary Internal Combustion Engines	4.50E-01	0.01	1.81E-01	1.21E-01	0.00E+00	3.02E-01	4.05E-02	2.70E-02	0.00E+00	6.75E-02	3.69E-01
Miscellaneous Plastics Products	4.31E-01	0.01	3.40E-02	3.92E-01	0.00E+00	4.26E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-01
Cement, Hydraulic (not subject to Portland Cement MACT)	4.08E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	2.50E-03
Residential Heating: Bituminous and Lignite Coal Combustion	4.05E-01	0.01	0.00E+00	2.81E-01	0.00E+00	2.81E-01	0.00E+00	5.73E-02	0.00E+00	5.73E-02	3.38E-01
Telephone and Telegraph Apparatus	3.92E-01	0.01	3.91E-01	0.00E+00	0.00E+00	3.91E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.91E-01
Fluid Meters and Counting Devices	3.75E-01	0.01	0.00E+00	3.75E-01	0.00E+00	3.75E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-01
Primary Battery, Dry and Wet Manufacture	3.75E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.25E-01
Printing Trades Machinery Manufacturing	3.75E-01	0.01	3.75E-01	0.00E+00	0.00E+00	3.75E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-01
Relays and Industrial Controls	3.75E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-01	0.00E+00	3.75E-01	3.75E-01
Shipbuilding and Ship Repair (Surface Coating)	3.75E-01	0.01	2.80E-01	5.72E-03	0.00E+00	2.86E-01	5.45E-02	1.11E-03	0.00E+00	5.56E-02	3.42E-01
Speed Changers, Drives, and Gears	3.75E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.25E-01
Search and Navigation Equipment	3.50E-01	0.01	1.00E-01	2.50E-01	0.00E+00	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01
Printing/Publishing (Surface Coating)	2.98E-01	0.01	0.00E+00	2.98E-01	0.00E+00	2.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.98E-01
Transformers, Except Electronic	2.98E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.98E-01	0.00E+00	2.98E-01	2.98E-01
Hardware Manufacturing	2.60E-01	0.01	1.28E-01	2.50E-03	0.00E+00	1.30E-01	0.00E+00	4.50E-03	0.00E+00	4.50E-03	1.35E-01

Table 6 - 27 Base Year 1990 National Emission Estimates for Lead Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Fertilizers, Mixing only	2.58E-01	0.01	0.00E+00	7.50E-03	0.00E+00	7.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E-03
Sheet Metal Work	2.57E-01	0.01	1.32E-01	1.25E-01	0.00E+00	2.57E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.57E-01
Lead Pencils, Art Goods Manufacturing	2.55E-01	0.01	0.00E+00	2.55E-01	0.00E+00	2.55E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-01
Metal Coil (Surface Coating)	2.55E-01	0.01	1.13E-01	8.52E-03	0.00E+00	1.22E-01	6.80E-02	5.12E-03	0.00E+00	7.31E-02	1.95E-01
Communications Equipment, nec	2.54E-01	0.01	3.50E-03	0.00E+00	0.00E+00	3.50E-03	2.50E-01	0.00E+00	0.00E+00	2.50E-01	2.54E-01
Lighting Equipment	2.53E-01	0.01	0.00E+00	2.53E-01	0.00E+00	2.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-01
Phosphate Fertilizers Production	2.53E-01	0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	1.28E-01	0.00E+00	1.28E-01	2.53E-01
Elevators and Moving Stairways Manufacturing	2.50E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01	0.00E+00	2.50E-01	2.50E-01
Railroad Equipment Manufacturing	2.50E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01	0.00E+00	2.50E-01	2.50E-01
Space Research and Technology	2.50E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01	0.00E+00	2.50E-01	2.50E-01
Tire Cord And Fabrics	2.50E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	2.50E-01	2.50E-01
Miscellaneous Fabricated Wire Products	1.96E-01	0.01	0.00E+00	1.31E-01	0.00E+00	1.31E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-01
Utility Boilers - Coke	1.95E-01	0.01	1.46E-01	0.00E+00	0.00E+00	1.46E-01	2.79E-02	0.00E+00	0.00E+00	2.79E-02	1.74E-01
Power Transmission Equipment	1.75E-01	0.01	0.00E+00	5.00E-02	0.00E+00	5.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-02
Metal coating and allied services (3479)	1.74E-01	0.01	2.50E-03	1.60E-01	0.00E+00	1.63E-01	6.50E-03	5.00E-03	0.00E+00	1.15E-02	1.74E-01
Electronic Capacitors Manufacturing	1.68E-01	0.01	1.28E-01	5.00E-03	0.00E+00	1.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-01
Cold Finishing of Steel Shapes	1.60E-01	< 0.01	2.50E-03	1.58E-01	0.00E+00	1.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-01

Table 6 - 27 Base Year 1990 National Emission Estimates for Lead Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Residential Heating: Anthracite Coal Combustion	1.54E-01	< 0.01	0.00E+00	1.07E-01	0.00E+00	1.07E-01	0.00E+00	2.18E-02	0.00E+00	2.18E-02	1.29E-01
Electron Tubes Manufacturing	1.51E-01	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	1.46E-01	0.00E+00	0.00E+00	1.46E-01	1.51E-01
Aviation Gasoline Distribution: Stage I & II	1.50E-01	< 0.01	1.03E-02	9.38E-02	0.00E+00	1.04E-01	2.10E-03	1.91E-02	0.00E+00	2.12E-02	1.25E-01
Fabricated Structural Metal Products	1.49E-01	< 0.01	0.00E+00	1.27E-01	0.00E+00	1.27E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-01
Silverware and Plated Ware	1.33E-01	< 0.01	1.33E-01	0.00E+00	0.00E+00	1.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-01
Radio and Television Communications Equipment (3663)	1.30E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	5.00E-03	0.00E+00	1.30E-01	1.30E-01
Wool Fiberglass Manufacturing	1.30E-01	< 0.01	7.10E-02	7.17E-04	0.00E+00	7.17E-02	4.88E-02	4.93E-04	0.00E+00	4.93E-02	1.21E-01
Aluminum Die-Castings	1.28E-01	< 0.01	0.00E+00	5.00E-04	0.00E+00	5.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-04
Food Products Machinery Manufacturing	1.28E-01	< 0.01	1.28E-01	0.00E+00	0.00E+00	1.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01
Unsupported Plastics Profile Shapes	1.28E-01	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Nonferrous Forgings	1.26E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-04	1.25E-01	0.00E+00	1.26E-01	1.26E-01
Air and Gas Compressors	1.25E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dog and Cat Food	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Electrical Equipment and Supplies, nec	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Metal Forgings and Stampings	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Miscellaneous Fabricated Metal Products	1.25E-01	< 0.01	1.25E-01	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Miscellaneous Metal Work	1.25E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	1.25E-01	1.25E-01

Table 6 - 27 Base Year 1990 National Emission Estimates for Lead Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Space Vehicle Parts and Equipment, nec	1.25E-01	< 0.01	1.25E-01	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Textile Machinery	1.25E-01	< 0.01	1.25E-01	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Semiconductor Manufacturing	6.25E-02	< 0.01	6.25E-02	0.00E+00	0.00E+00	6.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.25E-02
Bolts, Nuts, Rivets and Washers Manufacturing	5.00E-02	< 0.01	0.00E+00	5.00E-02	0.00E+00	5.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-02
Gasoline Distribution (Stage 1)	4.81E-02	< 0.01	9.86E-04	1.87E-02	0.00E+00	1.97E-02	5.53E-04	1.05E-02	0.00E+00	1.11E-02	3.08E-02
Meat Packing Plants	4.80E-02	< 0.01	4.80E-02	0.00E+00	0.00E+00	4.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E-02
Lime Manufacturing	4.50E-02	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hand and Edge Tools Manufacturing	4.30E-02	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Commercial Physical Research	3.70E-02	< 0.01	0.00E+00	3.70E-02	0.00E+00	3.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E-02
Aluminum Extruded Products	3.00E-02	< 0.01	2.15E-02	0.00E+00	0.00E+00	2.15E-02	0.00E+00	6.00E-03	0.00E+00	6.00E-03	2.75E-02
X-ray Apparatus and Tubes	2.50E-02	< 0.01	0.00E+00	2.50E-02	0.00E+00	2.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-02
Aluminum Sheet, Plate, and Foil manufacturing	2.10E-02	< 0.01	2.10E-02	0.00E+00	0.00E+00	2.10E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E-02
Gasoline Distribution Stage II	2.00E-02	< 0.01	1.37E-03	1.25E-02	0.00E+00	1.39E-02	2.80E-04	2.55E-03	0.00E+00	2.83E-03	1.67E-02
Unsupported Plastics Film & Sheet	1.95E-02	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Printing, Coating, and Dyeing of Fabrics	1.75E-02	< 0.01	5.00E-03	0.00E+00	0.00E+00	5.00E-03	0.00E+00	1.25E-02	0.00E+00	1.25E-02	1.75E-02
Open Burning: Scrap Tires	1.63E-02	< 0.01	0.00E+00	1.11E-02	0.00E+00	1.11E-02	0.00E+00	2.61E-03	0.00E+00	2.61E-03	1.37E-02
Taconite Iron Ore Processing	1.62E-02	< 0.01	8.10E-04	9.90E-04	0.00E+00	1.80E-03	5.67E-03	6.93E-03	0.00E+00	1.26E-02	1.44E-02

Table 6 - 27 Base Year 1990 National Emission Estimates for Lead Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Nonmetallic Mineral Products Manufacturing	1.20E-02	< 0.01	0.00E+00	1.20E-02	0.00E+00	1.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-02
Mineral Wool Production	1.00E-02	< 0.01	4.67E-03	0.00E+00	0.00E+00	4.67E-03	2.67E-03	0.00E+00	0.00E+00	2.67E-03	7.33E-03
Electronic Resistors	9.00E-03	< 0.01	9.00E-03	0.00E+00	0.00E+00	9.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.00E-03
Measuring and Controlling Devices, nec	7.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Screw Machine Products Manufacturing	7.50E-03	< 0.01	2.50E-03	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Special Dies, Tools, Jigs and Fixtures	5.50E-03	< 0.01	0.00E+00	5.50E-03	0.00E+00	5.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.50E-03
Adhesives and Sealants	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Carbon and Graphite Products	5.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Conveyors and Conveying Equipment Manufacturing	5.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Electrical Industrial Apparatus, nec	5.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fluid Power Valves and Hose Fittings Manufacturing	5.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Food Preparations Production	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Iron and Steel Forging	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Boat Manufacturing	2.50E-03	< 0.01	2.50E-03	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Canned Fruits and Vegetables	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Chemicals and Allied Products Manufacturing	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	2.50E-03
Environmental Controls Manufacturing	2.50E-03	< 0.01	2.50E-03	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03

Table 6 - 27 Base Year 1990 National Emission Estimates for Lead Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	
Instruments to Measure Electricity	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	2.50E-03	2.50E-03
Mining Machinery Manufacturing	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Motor Vehicle Equipment	2.50E-03	< 0.01	2.50E-03	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Optical Instruments and Lenses	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Special Industry Machinery, nec	1.50E-03	< 0.01	0.00E+00	1.50E-03	0.00E+00	1.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-03
General Industrial Machinery Manufacturing	1.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	1.00E-03	1.00E-03
Petroleum Bulk Stations and Terminals (not subject to Petroleum Refining MACT)	5.00E-04	< 0.01	0.00E+00	5.00E-04	0.00E+00	5.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-04

**Table 6 - 28 Base Year 1990 National Emission Estimates for
Manganese Compounds**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Industrial Boilers	5.24E+02	18.41	2.57E+02	6.37E+01	0.00E+00	3.20E+02	6.70E+01	1.66E+01	0.00E+00	8.37E+01	4.04E+02
Electrometallurgical Products Manufacturing	4.06E+02	14.26	1.14E+00	1.12E+01	0.00E+00	1.23E+01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	1.26E+01
Residential Heating: Wood/Wood Residue Combustion	2.20E+02	7.73	0.00E+00	1.52E+02	0.00E+00	1.52E+02	0.00E+00	3.30E+01	0.00E+00	3.30E+01	1.85E+02
Coke By-Product Plants	2.13E+02	7.49	1.60E+02	0.00E+00	0.00E+00	1.60E+02	3.05E+01	0.00E+00	0.00E+00	3.05E+01	1.90E+02
Iron Foundries	1.82E+02	6.40	7.88E+01	1.39E+01	0.00E+00	9.27E+01	3.08E+01	2.89E+00	0.00E+00	3.37E+01	1.26E+02
Utility Boilers - Coal	1.80E+02	6.33	6.94E+01	0.00E+00	0.00E+00	6.94E+01	4.54E+01	0.00E+00	0.00E+00	4.54E+01	1.15E+02
Stainless and Non-stainless Steel Manufacture - EAF	1.67E+02	5.86	1.12E+02	9.61E+00	0.00E+00	1.21E+02	3.11E+01	3.70E+00	0.00E+00	3.48E+01	1.56E+02
Industrial Inorganic Chemical Manufacturing	1.54E+02	5.43	4.76E+01	1.09E+01	0.00E+00	5.85E+01	2.00E-03	8.83E-01	0.00E+00	8.85E-01	5.93E+01
Clay Products Manufacturing	8.64E+01	3.04	1.25E-01	2.44E+00	0.00E+00	2.57E+00	6.30E+01	6.86E-01	0.00E+00	6.37E+01	6.63E+01
Blast Furnaces and Steel Mills	8.29E+01	2.91	5.62E+01	1.61E+01	0.00E+00	7.23E+01	3.17E+00	3.83E+00	0.00E+00	7.00E+00	7.93E+01
Integrated Iron and Steel Manufacturing	7.58E+01	2.66	6.83E+01	0.00E+00	0.00E+00	6.83E+01	7.48E+00	0.00E+00	0.00E+00	7.48E+00	7.58E+01
Petroleum Refineries: Catalytic Cracking (Fluid and other) Units, Catalytic Reforming Units, and Sulfur Plant Units	4.69E+01	1.65	2.84E+01	0.00E+00	0.00E+00	2.84E+01	1.17E+01	0.00E+00	0.00E+00	1.17E+01	4.02E+01
Steel Foundries	3.13E+01	1.10	1.52E+01	1.08E+01	0.00E+00	2.61E+01	7.25E-02	4.66E+00	0.00E+00	4.73E+00	3.08E+01
Machine tools, Metal Forming Types	3.03E+01	1.07	2.98E+01	0.00E+00	0.00E+00	2.98E+01	0.00E+00	5.00E-01	0.00E+00	5.00E-01	3.03E+01
Pulp and Paper Production (combustion) MACT II	2.93E+01	1.03	5.42E+00	0.00E+00	0.00E+00	5.42E+00	1.00E+01	0.00E+00	0.00E+00	1.00E+01	1.55E+01
Mobile Sources: Non-Road Vehicles and Equipment - Other	2.80E+01	0.98	0.00E+00	0.00E+00	1.94E+01	1.94E+01	0.00E+00	0.00E+00	3.97E+00	3.97E+00	2.34E+01
MON	2.73E+01	0.96	1.98E+01	2.00E-01	0.00E+00	2.00E+01	3.22E+00	3.25E-02	0.00E+00	3.25E+00	2.33E+01

**Table 6 - 28 Base Year 1990 National Emission Estimates for
Manganese Compounds**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Institutional/Commercial Heating	2.60E+01	0.91	0.00E+00	2.02E+01	0.00E+00	2.02E+01	0.00E+00	3.60E+00	0.00E+00	3.60E+00	2.38E+01
Tanks and Tank Components Manufacturing	2.29E+01	0.80	2.50E-03	2.50E-03	0.00E+00	5.00E-03	2.29E+01	0.00E+00	0.00E+00	2.29E+01	2.29E+01
Mobile Sources: On-Road Vehicles	2.18E+01	0.77	0.00E+00	0.00E+00	1.08E+01	1.08E+01	0.00E+00	0.00E+00	3.70E+00	3.70E+00	1.45E+01
Construction Machinery Manufacturing	1.89E+01	0.66	6.68E-01	3.45E+00	0.00E+00	4.12E+00	2.07E+00	3.56E+00	0.00E+00	5.63E+00	9.76E+00
Fabricated Plate Work (Boiler Shops)	1.75E+01	0.61	9.71E+00	7.16E+00	0.00E+00	1.69E+01	0.00E+00	3.55E-02	0.00E+00	3.55E-02	1.69E+01
Prepared Feeds Manufacturing	1.66E+01	0.58	0.00E+00	6.83E+00	0.00E+00	6.83E+00	0.00E+00	4.87E+00	0.00E+00	4.87E+00	1.17E+01
Metal Stampings Manufacturing	1.40E+01	0.49	0.00E+00	1.74E-01	0.00E+00	1.74E-01	1.35E+01	6.50E-02	0.00E+00	1.35E+01	1.37E+01
Plastic Parts and Products (Surface Coating)	1.26E+01	0.44	2.44E+00	2.76E+00	0.00E+00	5.20E+00	2.72E+00	1.42E+00	0.00E+00	4.14E+00	9.34E+00
Primary Metal Products Manufacturing	1.15E+01	0.40	0.00E+00	1.02E+01	0.00E+00	1.02E+01	0.00E+00	9.12E-01	0.00E+00	9.12E-01	1.11E+01
Chemical Preparations	9.93E+00	0.35	6.72E+00	1.31E+00	0.00E+00	8.04E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	8.16E+00
Utility Boilers - Oil	9.50E+00	0.33	5.48E+00	2.35E+00	0.00E+00	7.82E+00	9.13E-01	3.91E-01	0.00E+00	1.30E+00	9.13E+00
Fabricated Structural Metal Manufacturing	8.78E+00	0.31	1.45E-02	6.44E+00	0.00E+00	6.46E+00	2.50E-01	1.26E+00	0.00E+00	1.51E+00	7.96E+00
Agricultural Chemicals and Pesticides	8.75E+00	0.31	0.00E+00	1.02E+00	0.00E+00	1.02E+00	0.00E+00	7.72E+00	0.00E+00	7.72E+00	8.74E+00
Municipal Waste Combustors	8.35E+00	0.29	5.33E+00	2.80E-01	0.00E+00	5.61E+00	1.49E+00	7.86E-02	0.00E+00	1.57E+00	7.18E+00
Inorganic Pigments Manufacturing	6.96E+00	0.24	1.25E-01	6.54E+00	0.00E+00	6.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.66E+00
Aluminum Sheet, Plate, and Foil manufacturing	5.87E+00	0.21	5.66E+00	1.25E-01	0.00E+00	5.79E+00	0.00E+00	7.20E-02	0.00E+00	7.20E-02	5.86E+00
Metal Coil (Surface Coating)	5.56E+00	0.20	2.47E+00	1.86E-01	0.00E+00	2.66E+00	1.48E+00	1.12E-01	0.00E+00	1.59E+00	4.25E+00

**Table 6 - 28 Base Year 1990 National Emission Estimates for
Manganese Compounds**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Reinforced Plastic Composites Production	5.31E+00	0.19	2.94E+00	4.43E-01	0.00E+00	3.38E+00	1.19E+00	1.79E-01	0.00E+00	1.37E+00	4.75E+00
Secondary Nonferrous Metals Production	4.98E+00	0.18	2.55E-01	1.01E+00	0.00E+00	1.26E+00	2.94E+00	9.50E-03	0.00E+00	2.95E+00	4.21E+00
Primary Battery, Dry and Wet Manufacture	4.67E+00	0.16	5.45E-01	2.18E+00	0.00E+00	2.73E+00	1.40E+00	2.45E-02	0.00E+00	1.42E+00	4.15E+00
Secondary Lead Smelting	4.56E+00	0.16	3.16E+00	2.75E-01	0.00E+00	3.43E+00	6.45E-02	5.60E-03	0.00E+00	7.01E-02	3.50E+00
Speed Changers, Drives, and Gears	4.51E+00	0.16	0.00E+00	3.79E-01	0.00E+00	3.79E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.79E-01
Railroad Equipment Manufacturing	4.35E+00	0.15	1.28E+00	4.18E-01	0.00E+00	1.70E+00	1.25E-01	1.65E+00	0.00E+00	1.77E+00	3.47E+00
Fertilizers, Mixing only	4.30E+00	0.15	0.00E+00	2.42E+00	0.00E+00	2.42E+00	0.00E+00	1.00E+00	0.00E+00	1.00E+00	3.41E+00
Primary Aluminum Production	3.97E+00	0.14	1.08E+00	0.00E+00	0.00E+00	1.08E+00	1.28E-01	0.00E+00	0.00E+00	1.28E-01	1.21E+00
Industrial Organic Chemicals Manufacturing	3.92E+00	0.14	2.67E+00	1.28E-01	0.00E+00	2.80E+00	0.00E+00	6.17E-01	0.00E+00	6.17E-01	3.42E+00
Aerospace Industries	3.86E+00	0.14	3.86E+00	5.00E-03	0.00E+00	3.86E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.86E+00
Steel Pipe and Tubes Manufacturing	3.76E+00	0.13	2.69E+00	1.97E-01	0.00E+00	2.88E+00	0.00E+00	8.75E-01	0.00E+00	8.75E-01	3.76E+00
Petroleum Refining (not subject to Petroleum Refining MACT)	3.70E+00	0.13	1.59E+00	2.07E-01	0.00E+00	1.80E+00	1.90E+00	0.00E+00	0.00E+00	1.90E+00	3.70E+00
Large Appliance (Surface Coating)	3.53E+00	0.12	2.26E+00	4.85E-01	0.00E+00	2.74E+00	1.25E-01	1.30E-01	0.00E+00	2.55E-01	3.00E+00
Polymers & Resins (I, II, and IV)	3.50E+00	0.12	5.00E-01	0.00E+00	0.00E+00	5.00E-01	9.50E-01	0.00E+00	0.00E+00	9.50E-01	1.45E+00
Iron and Steel Forging	2.94E+00	0.10	4.17E-01	1.66E+00	0.00E+00	2.08E+00	1.94E-01	4.11E-01	0.00E+00	6.05E-01	2.68E+00
Farm Machinery and Equipment Manufacturing	2.83E+00	0.10	9.75E-01	2.50E-01	0.00E+00	1.23E+00	8.50E-01	0.00E+00	0.00E+00	8.50E-01	2.08E+00
Residential Heating: Distillate Oil Combustion	2.54E+00	0.09	0.00E+00	1.76E+00	0.00E+00	1.76E+00	0.00E+00	3.60E-01	0.00E+00	3.60E-01	2.12E+00

**Table 6 - 28 Base Year 1990 National Emission Estimates for
Manganese Compounds**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Motor and Generators Manufacturing	2.49E+00	0.09	0.00E+00	2.24E+00	0.00E+00	2.24E+00	2.50E-03	0.00E+00	0.00E+00	2.50E-03	2.24E+00
Fabricated Metal Products, nec	2.46E+00	0.09	2.55E-01	1.54E+00	0.00E+00	1.80E+00	0.00E+00	2.73E-01	0.00E+00	2.73E-01	2.07E+00
Mobile Sources: Non-Road Vehicles and Equipment - Commercial Marine Vessels	2.32E+00	0.08	0.00E+00	0.00E+00	2.32E+00	2.32E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E+00
Valves and Pipe Fittings Manufacturing	2.30E+00	0.08	2.15E+00	2.10E-02	0.00E+00	2.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E+00
Primary Smelting and Refining of Zinc	2.08E+00	0.07	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	1.83E+00	0.00E+00	1.83E+00	2.08E+00
Shipbuilding and Ship Repair (Surface Coating)	2.05E+00	0.07	1.53E+00	3.13E-02	0.00E+00	1.57E+00	2.98E-01	6.09E-03	0.00E+00	3.04E-01	1.87E+00
Miscellaneous Fabricated Metal Products	1.95E+00	0.07	1.25E-01	1.82E+00	0.00E+00	1.94E+00	4.50E-03	0.00E+00	0.00E+00	4.50E-03	1.95E+00
Hazardous Waste Incineration	1.94E+00	0.07	1.02E+00	0.00E+00	0.00E+00	1.02E+00	3.90E-01	0.00E+00	0.00E+00	3.90E-01	1.41E+00
Oil and Gas Field Machinery Manufacturing	1.90E+00	0.07	2.50E-03	1.85E+00	0.00E+00	1.85E+00	0.00E+00	4.90E-02	0.00E+00	4.90E-02	1.90E+00
Heating Equipment, Except Electric	1.74E+00	0.06	0.00E+00	1.61E+00	0.00E+00	1.61E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	1.61E+00
Phosphate Fertilizers Production	1.64E+00	0.06	0.00E+00	5.08E-01	0.00E+00	5.08E-01	0.00E+00	6.27E-01	0.00E+00	6.27E-01	1.14E+00
Aluminum Foundries	1.59E+00	0.06	0.00E+00	2.94E-01	0.00E+00	2.94E-01	0.00E+00	6.75E-01	0.00E+00	6.75E-01	9.69E-01
Electronic Components, nec	1.54E+00	0.05	0.00E+00	4.35E-02	0.00E+00	4.35E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.35E-02
Cold Finishing of Steel Shapes	1.54E+00	0.05	0.00E+00	1.16E+00	0.00E+00	1.16E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.28E+00
Pumps and Pumping Equipment Manufacturing	1.52E+00	0.05	0.00E+00	1.17E+00	0.00E+00	1.17E+00	0.00E+00	8.50E-03	0.00E+00	8.50E-03	1.18E+00
Cathode Ray Television Picture Tubes Manufacturing	1.40E+00	0.05	1.40E+00	0.00E+00	0.00E+00	1.40E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E+00
Mining Machinery Manufacturing	1.39E+00	0.05	0.00E+00	1.12E+00	0.00E+00	1.12E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.24E+00

**Table 6 - 28 Base Year 1990 National Emission Estimates for
Manganese Compounds**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Aluminum Foundries (Castings)	1.26E+00	0.04	0.00E+00	2.56E-01	0.00E+00	2.56E-01	0.00E+00	1.00E+00	0.00E+00	1.00E+00	1.26E+00
Primary Copper Smelting	1.24E+00	0.04	1.51E-01	5.57E-02	0.00E+00	2.06E-01	5.06E-01	1.87E-01	0.00E+00	6.93E-01	8.99E-01
Steel Wire and Related Products Manufacturing	1.14E+00	0.04	0.00E+00	5.07E-01	0.00E+00	5.07E-01	1.27E-01	2.52E-01	0.00E+00	3.80E-01	8.87E-01
General Industrial Machinery Manufacturing	1.07E+00	0.04	6.92E-01	2.50E-01	0.00E+00	9.42E-01	1.25E-01	5.00E-03	0.00E+00	1.30E-01	1.07E+00
Electrical Housewares and Fans	1.01E+00	0.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Burial Caskets	1.00E+00	0.04	0.00E+00	1.28E-01	0.00E+00	1.28E-01	1.25E-01	0.00E+00	0.00E+00	1.25E-01	2.53E-01
Metal Furniture (Surface Coating)	1.00E+00	0.04	3.78E-01	0.00E+00	0.00E+00	3.78E-01	2.50E-01	0.00E+00	0.00E+00	2.50E-01	6.27E-01
Fabricated Pipe and Fittings	9.75E-01	0.03	0.00E+00	7.98E-01	0.00E+00	7.98E-01	0.00E+00	4.65E-02	0.00E+00	4.65E-02	8.45E-01
Sewage Sludge Incineration	8.79E-01	0.03	0.00E+00	7.25E-01	0.00E+00	7.25E-01	0.00E+00	1.16E-01	0.00E+00	1.16E-01	8.41E-01
Hoists, Cranes, and Monorails	8.02E-01	0.03	8.02E-01	0.00E+00	0.00E+00	8.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.02E-01
Sheet Metal Work	8.00E-01	0.03	0.00E+00	2.55E-01	0.00E+00	2.55E-01	0.00E+00	5.45E-01	0.00E+00	5.45E-01	8.00E-01
Mineral Wool Production	7.70E-01	0.03	3.59E-01	0.00E+00	0.00E+00	3.59E-01	2.05E-01	0.00E+00	0.00E+00	2.05E-01	5.65E-01
Miscellaneous Fabricated Wire Products	7.60E-01	0.03	3.75E-01	3.80E-01	0.00E+00	7.55E-01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	7.57E-01
Ball and Roller Bearings Manufacturing	6.69E-01	0.02	0.00E+00	3.95E-02	0.00E+00	3.95E-02	1.25E-01	2.50E-01	0.00E+00	3.75E-01	4.15E-01
Internal Combustion Engine Manufacturing	6.65E-01	0.02	0.00E+00	1.64E-01	0.00E+00	1.64E-01	5.00E-01	2.50E-03	0.00E+00	5.02E-01	6.65E-01
Power Transmission Equipment	6.31E-01	0.02	1.28E-01	3.78E-01	0.00E+00	5.05E-01	0.00E+00	1.26E-01	0.00E+00	1.26E-01	6.31E-01
Electrical Equipment and Supplies, nec	6.25E-01	0.02	0.00E+00	3.75E-01	0.00E+00	3.75E-01	2.50E-01	5.00E-04	0.00E+00	2.51E-01	6.25E-01

**Table 6 - 28 Base Year 1990 National Emission Estimates for
Manganese Compounds**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Welding Apparatus	5.90E-01	0.02	0.00E+00	5.90E-01	0.00E+00	5.90E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.90E-01
Aluminum Extruded Products	5.77E-01	0.02	3.25E-02	2.86E-01	0.00E+00	3.19E-01	0.00E+00	5.50E-03	0.00E+00	5.50E-03	3.24E-01
Boat Manufacturing	5.48E-01	0.02	3.96E-01	0.00E+00	0.00E+00	3.96E-01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	3.99E-01
Paper Industries Machinery	5.41E-01	0.02	0.00E+00	3.75E-01	0.00E+00	3.75E-01	0.00E+00	1.66E-01	0.00E+00	1.66E-01	5.41E-01
Primary Lead Smelting	5.15E-01	0.02	3.43E-01	0.00E+00	0.00E+00	3.43E-01	1.71E-01	0.00E+00	0.00E+00	1.71E-01	5.14E-01
Automotive stampings	5.14E-01	0.02	1.25E-01	2.50E-01	0.00E+00	3.75E-01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	5.00E-01
Custom Compound Purchased Resins Manufacturing	5.00E-01	0.02	0.00E+00	5.00E-01	0.00E+00	5.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-01
Metal Sanitary Ware Manufacturing	5.00E-01	0.02	0.00E+00	3.75E-01	0.00E+00	3.75E-01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	5.00E-01
Motor Vehicle Equipment	5.00E-01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Paper and Other Webs (Surface Coating)	5.00E-01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pharmaceuticals Production	5.00E-01	0.02	2.50E-01	2.50E-01	0.00E+00	5.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-01
Manufacturing Industries, nec	4.96E-01	0.02	0.00E+00	1.40E-01	0.00E+00	1.40E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-01
Medical Waste Incinerators	4.90E-01	0.02	3.42E-02	1.94E-01	0.00E+00	2.28E-01	1.68E-02	9.53E-02	0.00E+00	1.12E-01	3.40E-01
Fabricated Structural Metal Products	4.86E-01	0.02	0.00E+00	4.69E-01	0.00E+00	4.69E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.69E-01
Residential Heating: Bituminous and Lignite Coal Combustion	4.73E-01	0.02	0.00E+00	3.28E-01	0.00E+00	3.28E-01	0.00E+00	6.70E-02	0.00E+00	6.70E-02	3.95E-01
Primary Nonferrous Metals Production	4.71E-01	0.02	0.00E+00	3.00E-03	0.00E+00	3.00E-03	1.55E-02	4.53E-01	0.00E+00	4.68E-01	4.71E-01
Plating And Polishing	3.90E-01	0.01	2.50E-03	3.83E-01	0.00E+00	3.85E-01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	3.90E-01

**Table 6 - 28 Base Year 1990 National Emission Estimates for
Manganese Compounds**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Special Dies, Tools, Jigs and Fixtures	3.89E-01	0.01	0.00E+00	2.62E-01	0.00E+00	2.62E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-01
Welding Apparatus, Electric	3.83E-01	0.01	0.00E+00	3.75E-01	0.00E+00	3.75E-01	0.00E+00	5.00E-04	0.00E+00	5.00E-04	3.76E-01
Carburetors, Pistons, Rings and Valves Manufacturing	3.80E-01	0.01	1.28E-01	2.50E-01	0.00E+00	3.77E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-01
Paper Mills (not subject to Pulp and Paper MACT)	3.80E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.80E-01	0.00E+00	0.00E+00	3.80E-01	3.80E-01
Hand and Edge Tools Manufacturing	3.79E-01	0.01	1.28E-01	1.50E-03	0.00E+00	1.29E-01	1.25E-01	1.25E-01	0.00E+00	2.50E-01	3.79E-01
Brass, Bronze, Copper, Copper Base Alloy Foundries	3.78E-01	0.01	0.00E+00	3.78E-01	0.00E+00	3.78E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.78E-01
Metal Doors, Sash, and Trim	3.78E-01	0.01	0.00E+00	3.78E-01	0.00E+00	3.78E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.78E-01
Electronic Capacitors Manufacturing	3.75E-01	0.01	2.50E-01	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Glass Containers	3.75E-01	0.01	0.00E+00	3.75E-01	0.00E+00	3.75E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-01
Lighting Equipment	3.75E-01	0.01	0.00E+00	3.75E-01	0.00E+00	3.75E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-01
Power Driven Handtools	3.75E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Metal Valves	3.69E-01	0.01	0.00E+00	1.29E-01	0.00E+00	1.29E-01	0.00E+00	2.38E-01	0.00E+00	2.38E-01	3.66E-01
Nonferrous Rolling and Drawing	3.68E-01	0.01	3.60E-01	8.50E-03	0.00E+00	3.68E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.68E-01
Aluminum Die-Castings	3.41E-01	0.01	0.00E+00	6.00E-03	0.00E+00	6.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.00E-03
Stationary Internal Combustion Engines	3.00E-01	0.01	1.21E-01	8.04E-02	0.00E+00	2.01E-01	2.70E-02	1.80E-02	0.00E+00	4.50E-02	2.46E-01
Machine tools, Metal Cutting Types	2.94E-01	0.01	0.00E+00	2.53E-01	0.00E+00	2.53E-01	0.00E+00	4.20E-02	0.00E+00	4.20E-02	2.94E-01
Blowers and Fans	2.87E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-01	1.38E-01	0.00E+00	2.87E-01	2.87E-01

**Table 6 - 28 Base Year 1990 National Emission Estimates for
Manganese Compounds**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Conveyors and Conveying Equipment Manufacturing	2.62E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-02	1.25E-01	0.00E+00	1.35E-01	1.35E-01
Copper Foundries	2.58E-01	0.01	0.00E+00	2.55E-01	0.00E+00	2.55E-01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	2.58E-01
Industrial Furnaces and Ovens	2.55E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01	0.00E+00	1.28E-01	1.28E-01
Unsupported Plastics Profile Shapes	2.55E-01	0.01	0.00E+00	2.55E-01	0.00E+00	2.55E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-01
Lawn and Garden Equipment	2.53E-01	0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	1.28E-01	0.00E+00	1.28E-01	2.53E-01
Nonferrous Die-castings, Except Aluminum	2.52E-01	0.01	0.00E+00	1.50E-03	0.00E+00	1.50E-03	0.00E+00	2.50E-01	0.00E+00	2.50E-01	2.52E-01
Concrete Block and Brick	2.50E-01	0.01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Lead Pencils, Art Goods Manufacturing	2.50E-01	0.01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Plumbing Fixture Fittings and Trim	2.50E-01	0.01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Utility Boilers - Coke	2.28E-01	0.01	1.71E-01	0.00E+00	0.00E+00	1.71E-01	3.26E-02	0.00E+00	0.00E+00	3.26E-02	2.04E-01
Switchgear and Switchboard Apparatus	2.10E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Residential Heating: Anthracite Coal Combustion	1.79E-01	0.01	0.00E+00	1.24E-01	0.00E+00	1.24E-01	0.00E+00	2.53E-02	0.00E+00	2.53E-02	1.50E-01
Miscellaneous Metal Work	1.61E-01	0.01	0.00E+00	1.52E-01	0.00E+00	1.52E-01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	1.55E-01
Engine Electric Equipment	1.59E-01	0.01	3.35E-02	0.00E+00	0.00E+00	3.35E-02	1.25E-01	0.00E+00	0.00E+00	1.25E-01	1.59E-01
Copper Rolling and Drawing	1.57E-01	0.01	5.00E-03	2.40E-02	0.00E+00	2.90E-02	1.28E-01	0.00E+00	0.00E+00	1.28E-01	1.57E-01
Paints and Allied Products Manufacturing	1.47E-01	0.01	1.39E-01	8.50E-03	0.00E+00	1.47E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-01
Pressed and Blown Glass and Glassware Manufacturing	1.46E-01	0.01	1.41E-01	0.00E+00	0.00E+00	1.41E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-01

**Table 6 - 28 Base Year 1990 National Emission Estimates for
Manganese Compounds**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Miscellaneous Plastics Products	1.35E-01	< 0.01	0.00E+00	1.00E-02	0.00E+00	1.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02
Cutlery	1.30E-01	< 0.01	5.00E-03	0.00E+00	0.00E+00	5.00E-03	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.30E-01
Hardware Manufacturing	1.28E-01	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	5.55E-02	0.00E+00	5.55E-02	5.80E-02
Air and Gas Compressors	1.28E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bolts, Nuts, Rivets and Washers Manufacturing	1.28E-01	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Asbestos Products Manufacturing	1.27E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-01	0.00E+00	1.27E-01	1.27E-01
Accident And Health Insurance	1.25E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Clay Refractories (not subject to Refractories Manufacturing MACT)	1.25E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.25E-01
Concrete Products	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Electronic Coils and Transformers	1.25E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fabricated Metal Products Manufacturing	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Heavy Construction, Nec	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Household Vacuum Cleaners	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Metal Forgings and Stampings	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Metalworking Machinery	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Prefabricated Metal Buildings	1.25E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	1.25E-01	1.25E-01
Surgical and Medical Instruments Manufacturing	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01

**Table 6 - 28 Base Year 1990 National Emission Estimates for
Manganese Compounds**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Wire Springs	1.25E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.25E-01
Men's And Boys' Trousers And Slacks	1.12E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Adhesives and Sealants	5.25E-02	< 0.01	5.25E-02	0.00E+00	0.00E+00	5.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.25E-02
Polishes and Sanitation Goods Manufacturing	5.25E-02	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.25E-02	0.00E+00	0.00E+00	5.25E-02	5.25E-02
Dog and Cat Food	3.40E-02	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.40E-02	0.00E+00	3.40E-02	3.40E-02
Metal coating and allied services (3479)	3.20E-02	< 0.01	5.00E-04	2.50E-02	0.00E+00	2.55E-02	0.00E+00	6.50E-03	0.00E+00	6.50E-03	3.20E-02
Fluid Power Pumps and Motors	2.75E-02	< 0.01	2.50E-03	2.50E-02	0.00E+00	2.75E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.75E-02
Printing, Coating, and Dyeing of Fabrics	2.50E-02	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-04	0.00E+00	5.00E-04	5.00E-04
Special Industry Machinery, nec	2.45E-02	< 0.01	6.50E-03	1.80E-02	0.00E+00	2.45E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E-02
Metal Barrels, Drums, and Pails Manufacturing	2.05E-02	< 0.01	2.50E-03	2.50E-03	0.00E+00	5.00E-03	1.55E-02	0.00E+00	0.00E+00	1.55E-02	2.05E-02
Malt Beverages	1.70E-02	< 0.01	1.70E-02	0.00E+00	0.00E+00	1.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-02
Wood Furniture (Surface Coating)	1.70E-02	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-02	0.00E+00	0.00E+00	1.70E-02	1.70E-02
Fluid Power Cylinders and Activators	1.50E-02	< 0.01	0.00E+00	1.50E-02	0.00E+00	1.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-02
Storage Batteries Manufacturing	1.50E-02	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-02	0.00E+00	1.50E-02	1.50E-02
Saw Blades and Handsaws	1.25E-02	< 0.01	0.00E+00	1.25E-02	0.00E+00	1.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-02
Screw Machine Products Manufacturing	1.25E-02	< 0.01	2.50E-03	5.00E-03	0.00E+00	7.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E-03
Food Products Machinery	1.15E-02	< 0.01	1.15E-02	0.00E+00	0.00E+00	1.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-02

**Table 6 - 28 Base Year 1990 National Emission Estimates for
Manganese Compounds**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Men's and Boys' Work Clothing	1.00E-02	< 0.01	0.00E+00	1.00E-02	0.00E+00	1.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02
Steel and Iron Reclamation- Auto Scrap Burning	1.00E-02	< 0.01	0.00E+00	1.00E-02	0.00E+00	1.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02
Vegetable Oil Production	8.00E-03	< 0.01	7.87E-03	0.00E+00	0.00E+00	7.87E-03	1.62E-05	0.00E+00	0.00E+00	1.62E-05	7.88E-03
Fabricated Rubber Products, nec	7.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	2.50E-03	5.00E-03
Metal Cans and Shipping Containers	7.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nonferrous forgings	7.50E-03	< 0.01	5.00E-04	7.00E-03	0.00E+00	7.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E-03
Nonferrous Foundries, nec	7.50E-03	< 0.01	0.00E+00	7.50E-03	0.00E+00	7.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E-03
Transformers, Except Electronic	7.50E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	2.50E-03	0.00E+00	0.00E+00	2.50E-03	7.50E-03
Noncurrent-Carrying Wiring Devices	6.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	4.00E-03	0.00E+00	0.00E+00	4.00E-03	6.50E-03
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	6.00E-03	< 0.01	1.00E-03	5.00E-03	0.00E+00	6.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.00E-03
Industrial Machinery, nec	5.50E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Metal Heat Treating Manufacturing	5.50E-03	< 0.01	0.00E+00	5.50E-03	0.00E+00	5.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.50E-03
Semiconductor Manufacturing	5.50E-03	< 0.01	5.50E-03	0.00E+00	0.00E+00	5.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.50E-03
Crushed And Broken Limestone	5.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03	0.00E+00	5.00E-03	5.00E-03
Electrical Industrial Apparatus, nec	3.50E-03	< 0.01	2.50E-03	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Electric Lamps	2.50E-03	< 0.01	2.50E-03	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Engineering, Laboratory, Scientific and Research	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	2.50E-03

**Table 6 - 28 Base Year 1990 National Emission Estimates for
Manganese Compounds**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	
Industrial Patterns Packaging machinery	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Metal Can (Surface Coating)	2.50E-03	< 0.01	2.50E-03	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Ordnance and Accessories Manufacturing	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	2.50E-03	2.50E-03
Space Research and Technology	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	2.50E-03
Turbines and Turbine Generator Sets	2.50E-03	< 0.01	2.50E-03	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Uranium Hexafluoride Production	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 6 - 29 Base Year 1990 National Emission Estimates for Mercury Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Utility Boilers - Coal	5.10E+01	24.56	1.97E+01	0.00E+00	0.00E+00	1.97E+01	1.29E+01	0.00E+00	0.00E+00	1.29E+01	3.25E+01
Medical Waste Incinerators	5.02E+01	24.17	3.50E+00	1.99E+01	0.00E+00	2.34E+01	1.72E+00	9.75E+00	0.00E+00	1.15E+01	3.48E+01
Municipal Waste Combustors	4.17E+01	20.09	2.66E+01	1.40E+00	0.00E+00	2.80E+01	7.47E+00	3.93E-01	0.00E+00	7.86E+00	3.59E+01
Chlorine Production	9.96E+00	4.80	0.00E+00	2.59E+00	0.00E+00	2.59E+00	0.00E+00	5.28E+00	0.00E+00	5.28E+00	7.87E+00
Mobile Sources: Non-Road Vehicles and Equipment - Other	6.84E+00	3.29	0.00E+00	0.00E+00	4.75E+00	4.75E+00	0.00E+00	0.00E+00	9.69E-01	9.69E-01	5.71E+00
Hazardous Waste Incineration	5.72E+00	2.75	3.01E+00	0.00E+00	0.00E+00	3.01E+00	1.15E+00	0.00E+00	0.00E+00	1.15E+00	4.16E+00
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	5.27E+00	2.54	1.14E+00	1.25E-02	0.00E+00	1.16E+00	6.68E-01	1.55E+00	0.00E+00	2.21E+00	3.37E+00
Mobile Sources: On- Road Vehicles	5.00E+00	2.41	0.00E+00	0.00E+00	2.47E+00	2.47E+00	0.00E+00	0.00E+00	8.48E-01	8.48E-01	3.32E+00
Portland Cement, excluding hazardous waste-fired	4.00E+00	1.93	2.09E+00	2.32E-01	0.00E+00	2.32E+00	6.84E-01	7.60E-02	0.00E+00	7.60E-01	3.08E+00
Hydrochloric Acid Production	2.98E+00	1.44	1.65E+00	2.51E-02	0.00E+00	1.67E+00	9.85E-02	1.50E-03	0.00E+00	1.00E-01	1.77E+00
Industrial Boilers	2.09E+00	1.01	1.20E+00	1.92E-01	0.00E+00	1.39E+00	2.72E-01	4.40E-02	0.00E+00	3.16E-01	1.71E+00
Pulp and Paper Production (combustion) MACT II	1.90E+00	0.91	3.51E-01	0.00E+00	0.00E+00	3.51E-01	6.51E-01	0.00E+00	0.00E+00	6.51E-01	1.00E+00
Sewage Sludge Incineration	1.80E+00	0.87	0.00E+00	1.48E+00	0.00E+00	1.48E+00	0.00E+00	2.37E-01	0.00E+00	2.37E-01	1.72E+00
Animal Cremation	1.75E+00	0.84	0.00E+00	1.01E+00	0.00E+00	1.01E+00	0.00E+00	2.80E-01	0.00E+00	2.80E-01	1.29E+00
Lamp Breakage	1.50E+00	0.72	2.06E-01	8.35E-01	0.00E+00	1.04E+00	4.21E-02	1.70E-01	0.00E+00	2.12E-01	1.25E+00
Petroleum Refineries: Catalytic Cracking (Fluid and other) Units, Catalytic Reforming Units, and Sulfur Plant Units	1.42E+00	0.68	8.62E-01	0.00E+00	0.00E+00	8.62E-01	3.55E-01	0.00E+00	0.00E+00	3.55E-01	1.22E+00
Geothermal Power	1.30E+00	0.63	0.00E+00	4.58E-01	0.00E+00	4.58E-01	0.00E+00	1.92E-01	0.00E+00	1.92E-01	6.50E-01

Table 6 - 29 Base Year 1990 National Emission Estimates for Mercury Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Primary Lead Smelting	1.30E+00	0.63	4.29E-01	4.33E-03	0.00E+00	4.33E-01	4.29E-01	4.33E-03	0.00E+00	4.33E-01	8.67E-01
Residential Heating: Distillate Oil Combustion	1.27E+00	0.61	0.00E+00	8.81E-01	0.00E+00	8.81E-01	0.00E+00	1.80E-01	0.00E+00	1.80E-01	1.06E+00
Institutional/Commercial Heating	1.06E+00	0.51	0.00E+00	8.27E-01	0.00E+00	8.27E-01	0.00E+00	1.38E-01	0.00E+00	1.38E-01	9.65E-01
Industrial Inorganic Chemical Manufacturing	1.00E+00	0.48	7.50E-01	2.50E-01	0.00E+00	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00
Electric Lamps	8.75E-01	0.42	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.75E-01	0.00E+00	8.75E-01	8.75E-01
Dental Preparation and Use	8.00E-01	0.39	5.92E-01	0.00E+00	0.00E+00	5.92E-01	1.28E-01	0.00E+00	0.00E+00	1.28E-01	7.20E-01
General Laboratory Activities	8.00E-01	0.39	1.10E-01	4.45E-01	0.00E+00	5.55E-01	2.24E-02	9.09E-02	0.00E+00	1.13E-01	6.68E-01
Secondary Mercury Production	7.52E-01	0.36	3.76E-01	3.76E-01	0.00E+00	7.52E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.52E-01
Primary Copper Smelting	7.40E-01	0.36	8.99E-02	3.33E-02	0.00E+00	1.23E-01	3.02E-01	1.12E-01	0.00E+00	4.13E-01	5.37E-01
Lime Manufacturing	7.00E-01	0.34	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pulp mills (not subject to Pulp and Paper MACT)	6.25E-01	0.30	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.25E-01	0.00E+00	0.00E+00	6.25E-01	6.25E-01
Human Cremation	6.03E-01	0.29	0.00E+00	4.18E-01	0.00E+00	4.18E-01	0.00E+00	8.54E-02	0.00E+00	8.54E-02	5.04E-01
Instrument Manufacturing	5.00E-01	0.24	0.00E+00	4.25E-01	0.00E+00	4.25E-01	0.00E+00	4.50E-02	0.00E+00	4.50E-02	4.70E-01
Blast Furnaces and Steel Mills	2.50E-01	0.12	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Carbon Black Production	2.50E-01	0.12	1.51E-02	3.52E-02	0.00E+00	5.03E-02	4.33E-02	1.01E-01	0.00E+00	1.44E-01	1.95E-01
Secondary Nonferrous Metals Production	2.50E-01	0.12	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Space Research and Technology	2.50E-01	0.12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01	0.00E+00	2.50E-01	2.50E-01

Table 6 - 29 Base Year 1990 National Emission Estimates for Mercury Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Utility Boilers - Oil	2.50E-01	0.12	1.44E-01	6.18E-02	0.00E+00	2.06E-01	2.40E-02	1.03E-02	0.00E+00	3.43E-02	2.40E-01
Stationary Internal Combustion Engines	1.50E-01	0.07	6.03E-02	4.02E-02	0.00E+00	1.00E-01	1.35E-02	9.00E-03	0.00E+00	2.25E-02	1.23E-01
Custom Compound Purchased Resins Manufacturing	1.28E-01	0.06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Clay Products Manufacturing	1.10E-01	0.05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MON	9.65E-02	0.05	7.00E-02	7.07E-04	0.00E+00	7.07E-02	1.13E-02	1.15E-04	0.00E+00	1.15E-02	8.22E-02
Mobile Sources: Non-Road Vehicles and Equipment - Commercial Marine Vessels	9.00E-02	0.04	0.00E+00	0.00E+00	9.00E-02	9.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.00E-02
Residential Heating: Wood/Wood Residue Combustion	8.79E-02	0.04	0.00E+00	6.07E-02	0.00E+00	6.07E-02	0.00E+00	1.32E-02	0.00E+00	1.32E-02	7.38E-02
Residential Heating: Bituminous and Lignite Coal Combustion	8.01E-02	0.04	0.00E+00	5.56E-02	0.00E+00	5.56E-02	0.00E+00	1.13E-02	0.00E+00	1.13E-02	6.69E-02
Petroleum Refining (not subject to Petroleum Refining MACT)	4.35E-02	0.02	4.35E-02	0.00E+00	0.00E+00	4.35E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.35E-02
Utility Boilers - Coke	3.85E-02	0.02	2.89E-02	0.00E+00	0.00E+00	2.89E-02	5.50E-03	0.00E+00	0.00E+00	5.50E-03	3.44E-02
Residential Heating: Anthracite Coal Combustion	3.04E-02	0.01	0.00E+00	2.11E-02	0.00E+00	2.11E-02	0.00E+00	4.30E-03	0.00E+00	4.30E-03	2.54E-02
Industrial Organic Chemicals Manufacturing	2.00E-02	0.01	0.00E+00	2.00E-02	0.00E+00	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02
Primary Battery, Dry and Wet Manufacture	2.00E-02	0.01	9.60E-03	3.20E-03	0.00E+00	1.28E-02	1.50E-03	5.00E-04	0.00E+00	2.00E-03	1.48E-02
Secondary Lead Smelting	1.13E-02	0.01	7.83E-03	6.81E-04	0.00E+00	8.51E-03	1.60E-04	1.39E-05	0.00E+00	1.74E-04	8.68E-03
Paints and Allied Products Manufacturing	7.50E-03	< 0.01	0.00E+00	7.50E-03	0.00E+00	7.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E-03
Electronic Components, nec	7.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-03	0.00E+00	7.00E-03	7.00E-03
Fluorescent Lamp Recycling	6.00E-03	< 0.01	8.24E-04	3.34E-03	0.00E+00	4.16E-03	1.68E-04	6.81E-04	0.00E+00	8.50E-04	5.01E-03

Table 6 - 29 Base Year 1990 National Emission Estimates for Mercury Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Inorganic Pigments Manufacturing	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Nonmetallic Mineral Products Manufacturing	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Polymers & Resins (I, II, and IV)	4.00E-03	< 0.01	1.00E-03	2.50E-03	0.00E+00	3.50E-03	5.00E-04	0.00E+00	0.00E+00	5.00E-04	4.00E-03
Aerospace Industries	2.60E-03	< 0.01	2.30E-03	9.57E-05	0.00E+00	2.39E-03	1.25E-04	5.20E-06	0.00E+00	1.30E-04	2.52E-03
Plating And Polishing	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	2.50E-03
Electrical Industrial Apparatus, nec	1.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**Table 6 - 30 Base Year 1990 National Emission Estimates for
Methyl Chloride**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Industrial Organic Chemicals Manufacturing	2.10E+03	32.65	1.88E+03	4.88E+00	0.00E+00	1.89E+03	5.84E+01	1.83E+01	0.00E+00	7.67E+01	1.96E+03
MON	2.05E+03	31.84	1.49E+03	1.50E+01	0.00E+00	1.50E+03	2.41E+02	2.44E+00	0.00E+00	2.44E+02	1.75E+03
Chemical Manufacturing: Chloromethanes Production	6.09E+02	9.45	1.80E+02	0.00E+00	0.00E+00	1.80E+02	1.01E+02	0.00E+00	0.00E+00	1.01E+02	2.80E+02
Formaldehyde, Acrolein, Acetaldehyde, Butyraldehyde Production	3.44E+02	5.34	6.10E+01	0.00E+00	0.00E+00	6.10E+01	2.83E+02	0.00E+00	0.00E+00	2.83E+02	3.44E+02
Pharmaceuticals Production	3.29E+02	5.11	2.71E+02	8.39E+00	0.00E+00	2.80E+02	2.55E+01	7.90E-01	0.00E+00	2.63E+01	3.06E+02
Surface Active Agents Manufacturing	2.32E+02	3.60	2.03E+02	2.50E-02	0.00E+00	2.03E+02	2.40E+01	0.00E+00	0.00E+00	2.40E+01	2.27E+02
Polymers & Resins (I, II, and IV)	1.77E+02	2.75	6.96E+01	0.00E+00	0.00E+00	6.96E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.96E+01
Secondary Lead Smelting	1.29E+02	2.00	8.94E+01	7.77E+00	0.00E+00	9.71E+01	1.82E+00	1.59E-01	0.00E+00	1.98E+00	9.91E+01
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	1.12E+02	1.74	1.14E+01	0.00E+00	0.00E+00	1.14E+01	1.24E+01	0.00E+00	0.00E+00	1.24E+01	2.37E+01
Plastics Foam Products Manufacturing (not subject to Plastic Parts (Surface Coating) MACT)	7.15E+01	1.11	7.15E+01	0.00E+00	0.00E+00	7.15E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.15E+01
Agricultural Chemicals and Pesticides	5.86E+01	0.91	5.84E+01	2.71E-01	0.00E+00	5.86E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.86E+01
Paints and Allied Products Manufacturing	5.12E+01	0.79	5.04E+01	7.65E-01	0.00E+00	5.12E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.12E+01
Utility Boilers - Coal	5.10E+01	0.79	1.97E+01	0.00E+00	0.00E+00	1.97E+01	1.29E+01	0.00E+00	0.00E+00	1.29E+01	3.25E+01
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	4.02E+01	0.62	4.02E+01	0.00E+00	0.00E+00	4.02E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E+01
Fabricated Metal Products, nec	1.66E+01	0.26	1.66E+01	0.00E+00	0.00E+00	1.66E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E+01
Pulp and Paper Production (non-combustion) MACT I	1.39E+01	0.22	3.32E+00	0.00E+00	0.00E+00	3.32E+00	5.53E+00	0.00E+00	0.00E+00	5.53E+00	8.84E+00
Industrial Boilers	1.01E+01	0.16	6.11E+00	6.79E-01	0.00E+00	6.79E+00	1.37E+00	1.52E-01	0.00E+00	1.52E+00	8.31E+00

**Table 6 - 30 Base Year 1990 National Emission Estimates for
Methyl Chloride**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Polishes and Sanitation Goods Manufacturing	9.84E+00	0.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fabricated Rubber Products, nec	6.53E+00	0.10	6.53E+00	0.00E+00	0.00E+00	6.53E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.53E+00
Tire Production	5.95E+00	0.09	2.02E+00	2.04E-02	0.00E+00	2.04E+00	2.39E+00	2.41E-02	0.00E+00	2.41E+00	4.45E+00
Clay Products Manufacturing	3.80E+00	0.06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aerospace Industries	3.29E+00	0.05	3.29E+00	0.00E+00	0.00E+00	3.29E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.29E+00
Hydrochloric Acid Production	3.13E+00	0.05	1.73E+00	2.63E-02	0.00E+00	1.75E+00	1.03E-01	1.57E-03	0.00E+00	1.05E-01	1.86E+00
Chemicals and Allied Products Manufacturing	2.90E+00	0.05	0.00E+00	2.90E+00	0.00E+00	2.90E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E+00
Chemical Preparations	2.05E+00	0.03	7.25E-02	1.98E+00	0.00E+00	2.05E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.05E+00
Petroleum Refining (not subject to Petroleum Refining MACT)	1.47E+00	0.02	1.47E+00	0.00E+00	0.00E+00	1.47E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E+00
Institutional/Commercial Heating	1.08E+00	0.02	0.00E+00	8.42E-01	0.00E+00	8.42E-01	0.00E+00	1.40E-01	0.00E+00	1.40E-01	9.83E-01
Industrial Inorganic Chemical Manufacturing	9.63E-01	0.01	0.00E+00	4.60E-01	0.00E+00	4.60E-01	0.00E+00	5.00E-01	0.00E+00	5.00E-01	9.60E-01
Residential Heating: Bituminous and Lignite Coal Combustion	5.11E-01	0.01	0.00E+00	3.55E-01	0.00E+00	3.55E-01	0.00E+00	7.24E-02	0.00E+00	7.24E-02	4.27E-01
Utility Boilers - Coke	2.46E-01	< 0.01	1.85E-01	0.00E+00	0.00E+00	1.85E-01	3.51E-02	0.00E+00	0.00E+00	3.51E-02	2.20E-01
Industrial Gases Manufacturing	1.96E-01	< 0.01	0.00E+00	1.25E-02	0.00E+00	1.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-02
Residential Heating: Anthracite Coal Combustion	1.94E-01	< 0.01	0.00E+00	1.35E-01	0.00E+00	1.35E-01	0.00E+00	2.75E-02	0.00E+00	2.75E-02	1.62E-01

**Table 6 - 31 Base Year 1990 National Emission Estimates for
Methylene Chloride**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Flexible Polyurethane Foam Production	2.25E+04	21.66	1.56E+04	1.01E+03	0.00E+00	1.66E+04	2.90E+03	1.87E+02	0.00E+00	3.09E+03	1.97E+04
Aerospace Industries	1.96E+04	18.88	1.70E+04	7.17E+02	0.00E+00	1.77E+04	1.27E+03	3.69E+01	0.00E+00	1.31E+03	1.90E+04
Halogenated Solvent Cleaners	9.59E+03	9.23	5.10E+03	2.19E+03	0.00E+00	7.29E+03	8.73E+02	3.74E+02	0.00E+00	1.25E+03	8.54E+03
Pharmaceuticals Production	8.50E+03	8.19	6.81E+03	2.09E+02	0.00E+00	7.02E+03	8.96E+02	1.96E+01	0.00E+00	9.15E+02	7.93E+03
Flexible Polyurethane Foam Fabrication Operations	7.70E+03	7.41	1.19E+03	3.56E+03	0.00E+00	4.74E+03	3.89E+02	1.17E+03	0.00E+00	1.56E+03	6.30E+03
Plastic Parts and Products (Surface Coating)	5.58E+03	5.37	3.70E+03	1.45E+02	0.00E+00	3.84E+03	1.09E+03	3.94E+01	0.00E+00	1.13E+03	4.97E+03
Consumer Products Usage	4.53E+03	4.36	0.00E+00	3.14E+03	0.00E+00	3.14E+03	0.00E+00	6.41E+02	0.00E+00	6.41E+02	3.78E+03
Photographic Equipment And Supplies	4.38E+03	4.21	4.10E+03	4.05E+00	0.00E+00	4.11E+03	3.88E+00	0.00E+00	0.00E+00	3.88E+00	4.11E+03
MON	2.20E+03	2.12	1.60E+03	1.61E+01	0.00E+00	1.61E+03	2.59E+02	2.61E+00	0.00E+00	2.61E+02	1.87E+03
Pulp and Paper Production (non-combustion) MACT I	1.74E+03	1.67	3.26E+02	0.00E+00	0.00E+00	3.26E+02	5.95E+02	0.00E+00	0.00E+00	5.95E+02	9.21E+02
Municipal Landfills	1.55E+03	1.49	1.06E+02	9.69E+02	0.00E+00	1.07E+03	2.17E+01	1.98E+02	0.00E+00	2.19E+02	1.29E+03
Polymers & Resins (I, II, and IV)	1.49E+03	1.43	1.32E+03	2.53E+01	0.00E+00	1.34E+03	1.21E+02	0.00E+00	0.00E+00	1.21E+02	1.46E+03
Industrial Organic Chemicals Manufacturing	8.02E+02	0.77	1.76E+02	1.94E+01	0.00E+00	1.95E+02	7.46E+01	6.75E+00	0.00E+00	8.14E+01	2.76E+02
Miscellaneous Plastics Products	7.69E+02	0.74	2.73E+02	1.98E+01	0.00E+00	2.92E+02	3.20E+02	2.59E+01	0.00E+00	3.46E+02	6.38E+02
Publicly Owned Treatment Works (POTW) Emissions	6.00E+02	0.58	1.65E+01	4.00E+02	0.00E+00	4.16E+02	3.37E+00	8.16E+01	0.00E+00	8.50E+01	5.01E+02
Cathode Ray Television Picture Tubes Manufacturing	5.48E+02	0.53	4.64E+02	2.28E+00	0.00E+00	4.67E+02	7.67E+01	4.37E+00	0.00E+00	8.11E+01	5.48E+02
Paper and Other Webs (Surface Coating)	5.34E+02	0.51	5.29E+02	5.10E+00	0.00E+00	5.34E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.34E+02

**Table 6 - 31 Base Year 1990 National Emission Estimates for
Methylene Chloride**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Miscellaneous Fabricated Wire Products	5.12E+02	0.49	2.53E+02	7.50E+00	0.00E+00	2.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E+02
Boat Manufacturing	4.06E+02	0.39	1.50E+02	1.54E+01	0.00E+00	1.65E+02	6.47E+01	1.14E+01	0.00E+00	7.61E+01	2.41E+02
Plating And Polishing	3.93E+02	0.38	2.98E+02	1.08E+01	0.00E+00	3.09E+02	0.00E+00	1.25E+00	0.00E+00	1.25E+00	3.10E+02
Large Appliance (Surface Coating)	3.85E+02	0.37	2.48E+02	3.89E+01	0.00E+00	2.87E+02	3.05E+01	1.82E+01	0.00E+00	4.87E+01	3.36E+02
Adhesives and Sealants	3.10E+02	0.30	2.55E+02	4.51E+01	0.00E+00	3.00E+02	5.86E+00	0.00E+00	0.00E+00	5.86E+00	3.06E+02
Electronic Capacitors Manufacturing	2.95E+02	0.28	2.19E+02	0.00E+00	0.00E+00	2.19E+02	2.67E+01	0.00E+00	0.00E+00	2.67E+01	2.46E+02
Paints and Allied Products Manufacturing	2.94E+02	0.28	1.48E+02	9.23E+01	0.00E+00	2.41E+02	1.19E+01	1.42E+00	0.00E+00	1.33E+01	2.54E+02
Glass Containers	2.88E+02	0.28	1.92E+02	8.28E-01	0.00E+00	1.93E+02	4.66E+01	3.75E-01	0.00E+00	4.70E+01	2.40E+02
Fabricated Metal Products, nec	2.81E+02	0.27	2.71E+02	3.02E+00	0.00E+00	2.74E+02	6.00E+00	1.52E+00	0.00E+00	7.52E+00	2.81E+02
Chemical Preparations	2.72E+02	0.26	1.73E+02	9.19E+00	0.00E+00	1.82E+02	0.00E+00	9.73E-01	0.00E+00	9.73E-01	1.83E+02
Space Propulsion Units and Parts Manufacturing	2.70E+02	0.26	1.51E+01	0.00E+00	0.00E+00	1.51E+01	1.85E+01	0.00E+00	0.00E+00	1.85E+01	3.37E+01
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	2.66E+02	0.26	3.92E+01	1.25E-01	0.00E+00	3.93E+01	3.40E+00	0.00E+00	0.00E+00	3.40E+00	4.27E+01
Industrial Inorganic Chemical Manufacturing	2.58E+02	0.25	2.31E+02	1.54E+01	0.00E+00	2.46E+02	0.00E+00	1.02E+00	0.00E+00	1.02E+00	2.47E+02
Tire Production	2.29E+02	0.22	7.76E+01	7.84E-01	0.00E+00	7.84E+01	9.18E+01	9.27E-01	0.00E+00	9.27E+01	1.71E+02
Telephone and Telegraph Apparatus	2.27E+02	0.22	2.07E+02	4.59E+00	0.00E+00	2.12E+02	1.53E+01	0.00E+00	0.00E+00	1.53E+01	2.27E+02
Printing, Coating, and Dyeing of Fabrics	2.19E+02	0.21	1.10E+02	2.37E+01	0.00E+00	1.33E+02	3.16E+01	0.00E+00	0.00E+00	3.16E+01	1.65E+02
Electronic Components, nec	1.89E+02	0.18	1.67E+02	9.63E+00	0.00E+00	1.76E+02	0.00E+00	1.29E+01	0.00E+00	1.29E+01	1.89E+02

**Table 6 - 31 Base Year 1990 National Emission Estimates for
Methylene Chloride**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Agricultural Chemicals and Pesticides	1.82E+02	0.17	6.30E+01	2.49E+00	0.00E+00	6.55E+01	1.15E+02	0.00E+00	0.00E+00	1.15E+02	1.81E+02
Fabricated Rubber Products, nec	1.78E+02	0.17	5.05E+01	2.53E+01	0.00E+00	7.58E+01	4.08E+01	0.00E+00	0.00E+00	4.08E+01	1.17E+02
Gaskets, Packing and Sealing Devices	1.66E+02	0.16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nonferrous Wire Drawing and Insulating	1.61E+02	0.15	8.92E+01	2.74E+01	0.00E+00	1.17E+02	3.91E+01	0.00E+00	0.00E+00	3.91E+01	1.56E+02
Ophthalmic Goods	1.50E+02	0.14	1.46E+02	0.00E+00	0.00E+00	1.46E+02	0.00E+00	3.90E+00	0.00E+00	3.90E+00	1.50E+02
Electronic Connectors	1.43E+02	0.14	1.76E+01	0.00E+00	0.00E+00	1.76E+01	9.45E+01	0.00E+00	0.00E+00	9.45E+01	1.12E+02
Copper Rolling and Drawing	1.31E+02	0.13	1.31E+02	0.00E+00	0.00E+00	1.31E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E+02
Plastics Pipe	1.30E+02	0.12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E+02	0.00E+00	0.00E+00	1.30E+02	1.30E+02
Electronic Resistors	1.29E+02	0.12	8.94E+00	0.00E+00	0.00E+00	8.94E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.94E+00
Flat Glass	1.28E+02	0.12	1.28E+02	0.00E+00	0.00E+00	1.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E+02
Surgical and Medical Instruments Manufacturing	1.21E+02	0.12	1.02E+02	0.00E+00	0.00E+00	1.02E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E+02
Aluminum Extruded Products	1.17E+02	0.11	9.35E+01	0.00E+00	0.00E+00	9.35E+01	0.00E+00	5.10E+00	0.00E+00	5.10E+00	9.86E+01
Pens and Mechanical Pencils	1.14E+02	0.11	1.14E+02	0.00E+00	0.00E+00	1.14E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E+02
Wood Furniture (Surface Coating)	1.14E+02	0.11	2.87E+01	6.32E+00	0.00E+00	3.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E+01
Utility Boilers - Coal	1.10E+02	0.11	4.24E+01	0.00E+00	0.00E+00	4.24E+01	2.78E+01	0.00E+00	0.00E+00	2.78E+01	7.02E+01
Rubber and Plastic Hose and Belting Manufacturing	1.10E+02	0.11	3.45E+00	0.00E+00	0.00E+00	3.45E+00	9.50E+01	0.00E+00	0.00E+00	9.50E+01	9.85E+01
Semiconductor Manufacturing	1.07E+02	0.10	9.17E+01	1.55E+01	0.00E+00	1.07E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02

**Table 6 - 31 Base Year 1990 National Emission Estimates for
Methylene Chloride**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Communications Equipment, nec	1.03E+02	0.10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.90E+01	3.91E+00	0.00E+00	1.03E+02	1.03E+02
Printing/Publishing (Surface Coating)	9.69E+01	0.09	7.03E+01	1.55E+01	0.00E+00	8.59E+01	5.75E+00	5.23E+00	0.00E+00	1.10E+01	9.69E+01
Blowers and Fans	9.32E+01	0.09	5.00E+00	0.00E+00	0.00E+00	5.00E+00	2.75E+01	0.00E+00	0.00E+00	2.75E+01	3.25E+01
Food Preparations Production	9.30E+01	0.09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.30E+01	0.00E+00	0.00E+00	9.30E+01	9.30E+01
Metal Stampings Manufacturing	9.19E+01	0.09	8.73E+01	0.00E+00	0.00E+00	8.73E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.73E+01
Noncurrent-Carrying Wiring Devices	8.77E+01	0.08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.77E+01	0.00E+00	0.00E+00	8.77E+01	8.77E+01
Fabricated Plate Work (Boiler Shops)	8.76E+01	0.08	1.04E+01	0.00E+00	0.00E+00	1.04E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E+01
Polishes and Sanitation Goods Manufacturing	8.65E+01	0.08	1.20E+01	3.09E+01	0.00E+00	4.29E+01	4.10E+01	2.50E+00	0.00E+00	4.35E+01	8.64E+01
Fabricated Structural Metal Manufacturing	8.57E+01	0.08	8.57E+01	0.00E+00	0.00E+00	8.57E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.57E+01
Screw Machine Products Manufacturing	8.34E+01	0.08	5.73E+01	2.62E+01	0.00E+00	8.34E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.34E+01
Unsupported Plastics Film & Sheet	7.46E+01	0.07	5.25E+01	0.00E+00	0.00E+00	5.25E+01	0.00E+00	7.60E+00	0.00E+00	7.60E+00	6.01E+01
Stainless and Non-stainless Steel Manufacture - EAF	7.45E+01	0.07	5.00E+01	4.29E+00	0.00E+00	5.43E+01	1.39E+01	1.65E+00	0.00E+00	1.55E+01	6.98E+01
Hand and Edge Tools Manufacturing	7.38E+01	0.07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Wood Products	7.15E+01	0.07	1.16E+01	0.00E+00	0.00E+00	1.16E+01	2.67E+01	0.00E+00	0.00E+00	2.67E+01	3.83E+01
Commercial Printing, Lithographic	7.14E+01	0.07	6.15E+01	9.95E+00	0.00E+00	7.14E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.14E+01
Transportation Equipment	7.00E+01	0.07	7.00E+01	0.00E+00	0.00E+00	7.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E+01
Cold Finishing of Steel Shapes	6.85E+01	0.07	6.85E+01	0.00E+00	0.00E+00	6.85E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.85E+01

**Table 6 - 31 Base Year 1990 National Emission Estimates for
Methylene Chloride**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Custom Compound Purchased Resins Manufacturing	6.82E+01	0.07	3.99E+01	1.07E+01	0.00E+00	5.07E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E+01
Metal Furniture (Surface Coating)	6.77E+01	0.07	2.19E+00	6.40E+00	0.00E+00	8.59E+00	0.00E+00	4.40E+00	0.00E+00	4.40E+00	1.30E+01
Prefabricated Metal Buildings	6.45E+01	0.06	4.55E+01	0.00E+00	0.00E+00	4.55E+01	6.73E+00	0.00E+00	0.00E+00	6.73E+00	5.22E+01
Iron Foundries	6.41E+01	0.06	2.76E+01	2.50E-03	0.00E+00	2.76E+01	2.95E+01	0.00E+00	0.00E+00	2.95E+01	5.71E+01
Apparel and Accessories, nec	6.23E+01	0.06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.93E+00	0.00E+00	2.93E+00	2.93E+00
Steel Foundries	6.16E+01	0.06	6.16E+01	0.00E+00	0.00E+00	6.16E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.16E+01
Internal Combustion Engine Manufacturing	6.04E+01	0.06	4.85E+01	0.00E+00	0.00E+00	4.85E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E+01
Manufacturing Industries, nec	5.89E+01	0.06	7.83E+00	1.92E+01	0.00E+00	2.70E+01	8.00E-01	3.51E+00	0.00E+00	4.31E+00	3.13E+01
Soap and Other Detergents Manufacturing	5.88E+01	0.06	5.00E+01	8.76E+00	0.00E+00	5.88E+01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	5.88E+01
Pressed and Blown Glass and Glassware Manufacturing	5.84E+01	0.06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E+01	2.50E-01	0.00E+00	5.03E+01	5.03E+01
Relays and Industrial Controls	5.49E+01	0.05	0.00E+00	8.75E+00	0.00E+00	8.75E+00	0.00E+00	6.03E-01	0.00E+00	6.03E-01	9.35E+00
Clay Products Manufacturing	5.38E+01	0.05	2.07E+01	0.00E+00	0.00E+00	2.07E+01	9.40E+00	0.00E+00	0.00E+00	9.40E+00	3.01E+01
Construction Machinery Manufacturing	5.31E+01	0.05	1.41E+01	0.00E+00	0.00E+00	1.41E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E+01
Railroad Equipment Manufacturing	5.00E+01	0.05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carburetors, Pistons, Rings and Valves Manufacturing	4.95E+01	0.05	4.95E+01	0.00E+00	0.00E+00	4.95E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.95E+01
Chemicals and Allied Products Manufacturing	4.80E+01	0.05	4.73E+01	2.50E-01	0.00E+00	4.75E+01	0.00E+00	5.00E-01	0.00E+00	5.00E-01	4.80E+01
Steel Wire and Related Products Manufacturing	4.76E+01	0.05	4.31E+01	0.00E+00	0.00E+00	4.31E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.31E+01

**Table 6 - 31 Base Year 1990 National Emission Estimates for
Methylene Chloride**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Motor and Generators Manufacturing	4.57E+01	0.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.05E+00	0.00E+00	2.05E+00	2.05E+00
Wood Partitions and Fixtures	4.18E+01	0.04	7.89E+00	0.00E+00	0.00E+00	7.89E+00	2.78E+01	0.00E+00	0.00E+00	2.78E+01	3.56E+01
Industrial Machinery, nec	4.08E+01	0.04	3.24E+01	0.00E+00	0.00E+00	3.24E+01	0.00E+00	8.36E+00	0.00E+00	8.36E+00	4.08E+01
National Security	3.93E+01	0.04	9.15E+00	0.00E+00	0.00E+00	9.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.15E+00
Hardware Manufacturing	3.72E+01	0.04	2.56E+01	2.50E-01	0.00E+00	2.59E+01	1.14E+01	0.00E+00	0.00E+00	1.14E+01	3.72E+01
Flavoring Extracts and Syrups Production	3.48E+01	0.03	3.36E+01	1.16E+00	0.00E+00	3.48E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.48E+01
Architectural Metal Work	3.32E+01	0.03	3.32E+01	0.00E+00	0.00E+00	3.32E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.32E+01
Sheet Metal Work	3.31E+01	0.03	3.31E+01	0.00E+00	0.00E+00	3.31E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.31E+01
Inorganic Pigments Manufacturing	3.19E+01	0.03	1.11E+01	2.50E-01	0.00E+00	1.13E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E+01
Manifold Business Forms	3.18E+01	0.03	0.00E+00	1.62E+01	0.00E+00	1.62E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E+01
Footwear Cut Stock	3.16E+01	0.03	2.50E+01	0.00E+00	0.00E+00	2.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E+01
Wood Building Products (Surface Coating)	3.03E+01	0.03	1.00E+01	0.00E+00	0.00E+00	1.00E+01	1.74E+01	0.00E+00	0.00E+00	1.74E+01	2.74E+01
Potato Chips and Similar Snacks	2.94E+01	0.03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.94E+01	0.00E+00	0.00E+00	2.94E+01	2.94E+01
General Industrial Machinery Manufacturing	2.72E+01	0.03	0.00E+00	5.21E+00	0.00E+00	5.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.21E+00
Automotive stampings	2.68E+01	0.03	1.60E+01	5.58E+00	0.00E+00	2.16E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E+01
Nonferrous Rolling and Drawing	2.67E+01	0.03	2.39E+01	2.83E+00	0.00E+00	2.67E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E+01
Food Products Machinery Manufacturing	2.62E+01	0.03	2.62E+01	0.00E+00	0.00E+00	2.62E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E+01

**Table 6 - 31 Base Year 1990 National Emission Estimates for
Methylene Chloride**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Men's Footwear, Except Athletic	2.62E+01	0.03	5.95E+00	5.14E+00	0.00E+00	1.11E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+01
Process Control Instruments	2.58E+01	0.02	2.54E+01	3.75E-01	0.00E+00	2.58E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E+01
Metal Can (Surface Coating)	2.55E+01	0.02	1.95E+01	0.00E+00	0.00E+00	1.95E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E+01
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	2.52E+01	0.02	4.54E+00	2.06E+01	0.00E+00	2.52E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.52E+01
Plumbing Fixture Fittings and Trim	2.39E+01	0.02	5.79E+00	1.25E-01	0.00E+00	5.91E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.91E+00
Welding Apparatus	2.39E+01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.39E+01	0.00E+00	0.00E+00	2.39E+01	2.39E+01
Optical Instruments and Lenses	2.33E+01	0.02	1.52E+01	0.00E+00	0.00E+00	1.52E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E+01
Printing Trades Machinery Manufacturing	2.33E+01	0.02	2.33E+01	0.00E+00	0.00E+00	2.33E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E+01
Surgical Appliances and Supplies Manufacturing	2.28E+01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E+01	0.00E+00	1.23E+01	1.23E+01
Products of Purchased Glass	2.23E+01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E+01	2.50E-01	0.00E+00	2.23E+01	2.23E+01
Polycarbonates Production	2.07E+01	0.02	1.73E+01	0.00E+00	0.00E+00	1.73E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E+01
Switchgear and Switchboard Apparatus	1.92E+01	0.02	6.55E+00	1.26E+01	0.00E+00	1.92E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.92E+01
Space Vehicle Parts and Equipment, nec	1.88E+01	0.02	9.73E+00	3.65E+00	0.00E+00	1.34E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E+01
Instruments to Measure Electricity	1.81E+01	0.02	5.13E+00	0.00E+00	0.00E+00	5.13E+00	1.30E+01	0.00E+00	0.00E+00	1.30E+01	1.81E+01
Aluminum Foundries (Castings)	1.80E+01	0.02	1.80E+01	0.00E+00	0.00E+00	1.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E+01
Engine Electric Equipment	1.76E+01	0.02	7.88E+00	0.00E+00	0.00E+00	7.88E+00	9.69E+00	0.00E+00	0.00E+00	9.69E+00	1.76E+01
Aluminum Sheet, Plate, and Foil manufacturing	1.75E+01	0.02	1.75E+01	0.00E+00	0.00E+00	1.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E+01

**Table 6 - 31 Base Year 1990 National Emission Estimates for
Methylene Chloride**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Electronic Coils and Transformers	1.74E+01	0.02	0.00E+00	9.85E+00	0.00E+00	9.85E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.85E+00
Rental Of Railroad Cars	1.70E+01	0.02	1.70E+01	0.00E+00	0.00E+00	1.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E+01
Certified Air Trans	1.69E+01	0.02	1.69E+01	0.00E+00	0.00E+00	1.69E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E+01
Steel Springs, Except Wire	1.60E+01	0.02	1.60E+01	0.00E+00	0.00E+00	1.60E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E+01
Hydrochloric Acid Production	1.57E+01	0.02	8.68E+00	1.32E-01	0.00E+00	8.81E+00	5.19E-01	7.91E-03	0.00E+00	5.27E-01	9.34E+00
Search and Navigation Equipment	1.52E+01	0.01	1.52E+01	0.00E+00	0.00E+00	1.52E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E+01
Metal Services, nec	1.52E+01	0.01	1.52E+01	0.00E+00	0.00E+00	1.52E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E+01
Travel Trailers and Campers Manufacturing	1.49E+01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hose and Belting and Gaskets and Packing	1.48E+01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Small Arms	1.33E+01	0.01	1.33E+01	0.00E+00	0.00E+00	1.33E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E+01
Spandex Production	1.27E+01	0.01	1.27E+01	0.00E+00	0.00E+00	1.27E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E+01
Environmental Controls Manufacturing	1.23E+01	0.01	0.00E+00	5.56E+00	0.00E+00	5.56E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.56E+00
Saw Blades and Handsaws	1.10E+01	0.01	1.10E+01	0.00E+00	0.00E+00	1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E+01
Gaskets, Packing and Sealing Devices Manufacturing	1.09E+01	0.01	5.50E+00	0.00E+00	0.00E+00	5.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.50E+00
Footwear, Except Rubber, nec	1.09E+01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E+01	0.00E+00	0.00E+00	1.09E+01	1.09E+01
Valves and Pipe Fittings Manufacturing	1.06E+01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cutlery	1.05E+01	0.01	1.05E+01	0.00E+00	0.00E+00	1.05E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E+01

**Table 6 - 31 Base Year 1990 National Emission Estimates for
Methylene Chloride**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Aluminum Die-Castings	9.90E+00	0.01	0.00E+00	9.90E+00	0.00E+00	9.90E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.90E+00
Fasteners, Buttons, Needles, and Pins	9.63E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E+00	0.00E+00	0.00E+00	7.00E+00	7.00E+00
Engineering, Laboratory, Scientific and Research	9.53E+00	0.01	9.53E+00	0.00E+00	0.00E+00	9.53E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.53E+00
Shipbuilding and Ship Repair (Surface Coating)	9.45E+00	0.01	7.06E+00	1.44E-01	0.00E+00	7.21E+00	1.37E+00	2.80E-02	0.00E+00	1.40E+00	8.61E+00
Metal Doors, Sash, and Trim	9.38E+00	0.01	0.00E+00	4.53E+00	0.00E+00	4.53E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.53E+00
Electronic Components and Accessories	9.00E+00	0.01	0.00E+00	9.00E+00	0.00E+00	9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.00E+00
Wood Preserving	9.00E+00	0.01	0.00E+00	9.00E+00	0.00E+00	9.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.00E+00
Metal coating and allied services (3479)	8.93E+00	0.01	3.30E+00	5.63E+00	0.00E+00	8.93E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.93E+00
Aluminum Foundries	8.50E+00	0.01	0.00E+00	8.50E+00	0.00E+00	8.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.50E+00
Metal Valves	8.18E+00	0.01	0.00E+00	8.18E+00	0.00E+00	8.18E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.18E+00
Ship and Boat Building (not subject to Boats Manufacturing MACT)	8.00E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.00E+00	0.00E+00	0.00E+00	8.00E+00	8.00E+00
Farm Machinery and Equipment Manufacturing	7.88E+00	0.01	4.38E+00	0.00E+00	0.00E+00	4.38E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.38E+00
Radio and Television Communications Equipment (3663)	7.70E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E+00	0.00E+00	7.70E+00	7.70E+00
Automotive Services, Nec	7.50E+00	0.01	0.00E+00	7.50E+00	0.00E+00	7.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E+00
Upholstered Household Furniture	7.02E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Electric Lamps	6.88E+00	0.01	6.88E+00	0.00E+00	0.00E+00	6.88E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.88E+00
Luggage	6.88E+00	0.01	0.00E+00	6.75E+00	0.00E+00	6.75E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	6.88E+00

**Table 6 - 31 Base Year 1990 National Emission Estimates for
Methylene Chloride**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Ordnance and Accessories Manufacturing	6.85E+00	0.01	6.85E+00	0.00E+00	0.00E+00	6.85E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.85E+00
Jewelry, Precious Metal	6.80E+00	0.01	0.00E+00	6.80E+00	0.00E+00	6.80E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E+00
Men's and Boys' Shirts	6.79E+00	0.01	0.00E+00	6.79E+00	0.00E+00	6.79E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.79E+00
Women's Footwear, Except Athletic	6.72E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Secondary Lead Smelting	6.42E+00	0.01	4.45E+00	3.87E-01	0.00E+00	4.83E+00	9.07E-02	7.89E-03	0.00E+00	9.86E-02	4.93E+00
Machine Tool Accessories	6.38E+00	0.01	0.00E+00	6.38E+00	0.00E+00	6.38E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.38E+00
Special Dies, Tools, Jigs and Fixtures	6.38E+00	0.01	0.00E+00	6.38E+00	0.00E+00	6.38E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.38E+00
Industrial Gases Manufacturing	6.20E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ordnance And Accessories, nec	6.15E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.15E+00	0.00E+00	6.15E+00	6.15E+00
Tanks and Tank Components Manufacturing	6.15E+00	0.01	0.00E+00	6.15E+00	0.00E+00	6.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.15E+00
Concrete Block and Brick	6.15E+00	0.01	6.15E+00	0.00E+00	0.00E+00	6.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.15E+00
Aluminum Rolling and Drawing, nec	6.10E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heating Equipment, Except Electric	6.00E+00	0.01	0.00E+00	6.00E+00	0.00E+00	6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.00E+00
Industrial Boilers	5.55E+00	0.01	3.35E+00	3.72E-01	0.00E+00	3.72E+00	7.49E-01	8.32E-02	0.00E+00	8.32E-01	4.55E+00
Carbon and Graphite Products	5.53E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.53E+00	0.00E+00	5.53E+00	5.53E+00
Concrete Products	5.16E+00	< 0.01	0.00E+00	5.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E+00
Metal Barrels, Drums, and Pails Manufacturing	5.14E+00	< 0.01	0.00E+00	5.14E+00	0.00E+00	5.14E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.14E+00

**Table 6 - 31 Base Year 1990 National Emission Estimates for
Methylene Chloride**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Electromedical Equipment Manufacturing	5.10E+00	< 0.01	0.00E+00	5.10E+00	0.00E+00	5.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00
Printing Ink	4.89E+00	< 0.01	1.68E+00	3.22E+00	0.00E+00	4.89E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.89E+00
Steel Pipe and Tubes Manufacturing	4.80E+00	< 0.01	4.80E+00	0.00E+00	0.00E+00	4.80E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E+00
Fabricated Pipe and Fittings	4.58E+00	< 0.01	0.00E+00	4.45E+00	0.00E+00	4.45E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.45E+00
Chemicals and Allied Products, nec	4.42E+00	< 0.01	0.00E+00	4.05E+00	0.00E+00	4.05E+00	0.00E+00	3.75E-01	0.00E+00	3.75E-01	4.42E+00
Guided Missiles and Space Vehicles Manufacturing	4.12E+00	< 0.01	4.12E+00	0.00E+00	0.00E+00	4.12E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E+00
Transformers, Except Electronic	4.07E+00	< 0.01	0.00E+00	1.05E+00	0.00E+00	1.05E+00	1.13E+00	1.90E+00	0.00E+00	3.02E+00	4.07E+00
Industrial Controls	3.87E+00	< 0.01	0.00E+00	3.87E+00	0.00E+00	3.87E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.87E+00
Paper Mills (not subject to Pulp and Paper MACT)	3.25E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pumps and Pumping Equipment Manufacturing	3.15E+00	< 0.01	0.00E+00	3.15E+00	0.00E+00	3.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E+00
Industrial Patterns Packaging machinery	2.95E+00	< 0.01	0.00E+00	2.95E+00	0.00E+00	2.95E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.95E+00
Burial Caskets	2.66E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lubricating Oils and Greases	2.08E+00	< 0.01	0.00E+00	1.33E+00	0.00E+00	1.33E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E+00
Fluid Meters and Counting Devices	1.91E+00	< 0.01	0.00E+00	1.91E+00	0.00E+00	1.91E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E+00
Radio and Television Communications Equipment (3662)	1.78E+00	< 0.01	0.00E+00	1.23E+00	0.00E+00	1.23E+00	5.50E-01	0.00E+00	0.00E+00	5.50E-01	1.78E+00
Power Transmission Equipment	1.75E+00	< 0.01	1.75E+00	0.00E+00	0.00E+00	1.75E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E+00
Mining Machinery Manufacturing	1.50E+00	< 0.01	0.00E+00	1.50E+00	0.00E+00	1.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E+00

**Table 6 - 31 Base Year 1990 National Emission Estimates for
Methylene Chloride**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Toys and Sporting Goods	1.50E+00	< 0.01	0.00E+00	1.50E+00	0.00E+00	1.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E+00
Optical instruments and lenses (disc. 1987, 3827)	1.40E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E+00	0.00E+00	1.40E+00	1.40E+00
Cement, Hydraulic (not subject to Portland Cement MACT)	1.32E+00	< 0.01	0.00E+00	3.05E-01	0.00E+00	3.05E-01	0.00E+00	9.90E-02	0.00E+00	9.90E-02	4.04E-01
Automatic Vending Machines	1.13E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Analytical Instruments	1.13E+00	< 0.01	0.00E+00	8.75E-01	0.00E+00	8.75E-01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	1.13E+00
Metal Coil (Surface Coating)	1.00E+00	< 0.01	4.44E-01	3.34E-02	0.00E+00	4.77E-01	2.67E-01	2.01E-02	0.00E+00	2.87E-01	7.64E-01
Refuse Systems	8.84E-01	< 0.01	0.00E+00	8.84E-01	0.00E+00	8.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.84E-01
Sewage Sludge Incineration	6.46E-01	< 0.01	0.00E+00	5.33E-01	0.00E+00	5.33E-01	0.00E+00	8.52E-02	0.00E+00	8.52E-02	6.18E-01
Institutional/Commercial Heating	5.91E-01	< 0.01	0.00E+00	4.61E-01	0.00E+00	4.61E-01	0.00E+00	7.68E-02	0.00E+00	7.68E-02	5.37E-01
Leather Goods, nec	5.50E-01	< 0.01	0.00E+00	5.50E-01	0.00E+00	5.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.50E-01
Petroleum Refining (not subject to Petroleum Refining MACT)	5.02E-01	< 0.01	1.25E-01	3.78E-01	0.00E+00	5.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.02E-01
Business Services, nec (7399)	5.00E-01	< 0.01	0.00E+00	5.00E-01	0.00E+00	5.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-01
Biological Products, Except Diagnostic	3.75E-01	< 0.01	0.00E+00	3.75E-01	0.00E+00	3.75E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-01
Commercial Physical Research	3.33E-01	< 0.01	0.00E+00	3.33E-01	0.00E+00	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-01
Residential Heating: Bituminous and Lignite Coal Combustion	2.80E-01	< 0.01	0.00E+00	1.94E-01	0.00E+00	1.94E-01	0.00E+00	3.96E-02	0.00E+00	3.96E-02	2.34E-01
Soaps, Cleaners, and Toilet Goods	2.53E-01	< 0.01	0.00E+00	2.53E-01	0.00E+00	2.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-01
Blast Furnaces and Steel Mills	1.45E-01	< 0.01	1.45E-01	0.00E+00	0.00E+00	1.45E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-01

**Table 6 - 31 Base Year 1990 National Emission Estimates for
Methylene Chloride**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Utility Boilers - Coke	1.35E-01	< 0.01	1.01E-01	0.00E+00	0.00E+00	1.01E-01	1.93E-02	0.00E+00	0.00E+00	1.93E-02	1.21E-01
Storage Batteries Manufacturing	1.28E-01	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Bottled and Canned Soft Drinks	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Industrial Patterns	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Motor Vehicle Equipment	1.25E-01	< 0.01	1.25E-01	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Petroleum Products, nec	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Rubber & Misc. Plastic Products	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Space Research and Technology	1.25E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.25E-01
Residential Heating: Anthracite Coal Combustion	1.06E-01	< 0.01	0.00E+00	7.35E-02	0.00E+00	7.35E-02	0.00E+00	1.50E-02	0.00E+00	1.50E-02	8.86E-02
Nonmetallic Mineral Products Manufacturing	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Primary Battery, Dry and Wet Manufacture	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Small Arms Ammunition	2.50E-03	< 0.01	2.50E-03	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Wire Springs	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03

**Table 6 - 32 Base Year 1990 National Emission Estimates for
Methylene Diphenyl Diisocyanate**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Boat Manufacturing	3.71E+01	15.51	1.74E+01	0.00E+00	0.00E+00	1.74E+01	2.88E+00	4.55E-02	0.00E+00	2.92E+00	2.03E+01
Iron Foundries	3.62E+01	15.11	2.88E-01	9.55E+00	0.00E+00	9.84E+00	1.88E+00	2.74E-01	0.00E+00	2.15E+00	1.20E+01
Industrial Machinery, nec	3.25E+01	13.57	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Wood Building Products (Surface Coating)	2.20E+01	9.20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.26E+00	0.00E+00	9.26E+00	9.26E+00
Plastic Parts and Products (Surface Coating)	2.01E+01	8.41	8.33E+00	9.64E+00	0.00E+00	1.80E+01	1.27E+00	4.06E-01	0.00E+00	1.67E+00	1.96E+01
Motor and Generators Manufacturing	1.74E+01	7.28	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	2.50E-03	2.50E-03
Manufacturing Industries, nec	8.03E+00	3.35	0.00E+00	6.57E-01	0.00E+00	6.57E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.57E-01
Reinforced Plastic Composites Production	6.64E+00	2.77	3.68E+00	5.55E-01	0.00E+00	4.23E+00	1.49E+00	2.24E-01	0.00E+00	1.71E+00	5.95E+00
Metal Doors, Sash, and Trim	5.24E+00	2.19	0.00E+00	5.98E-01	0.00E+00	5.98E-01	4.13E+00	2.50E-03	0.00E+00	4.13E+00	4.73E+00
Metal Furniture (Surface Coating)	5.16E+00	2.16	0.00E+00	2.55E-01	0.00E+00	2.55E-01	0.00E+00	3.86E+00	0.00E+00	3.86E+00	4.11E+00
Flexible Polyurethane Foam Production	5.00E+00	2.09	3.47E+00	2.24E-01	0.00E+00	3.69E+00	6.45E-01	4.17E-02	0.00E+00	6.86E-01	4.38E+00
Industrial Organic Chemicals Manufacturing	4.45E+00	1.86	1.45E-01	0.00E+00	0.00E+00	1.45E-01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	2.70E-01
Vegetable Oil Mills, nec	3.80E+00	1.59	0.00E+00	3.80E+00	0.00E+00	3.80E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.80E+00
Large Appliance (Surface Coating)	3.58E+00	1.49	5.08E-01	1.18E+00	0.00E+00	1.68E+00	3.78E-01	0.00E+00	0.00E+00	3.78E-01	2.06E+00
Ship and Boat Building (not subject to Boats Manufacturing MACT)	3.10E+00	1.29	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.10E+00	0.00E+00	0.00E+00	3.10E+00	3.10E+00
MON	3.02E+00	1.26	2.19E+00	2.22E-02	0.00E+00	2.22E+00	3.56E-01	3.59E-03	0.00E+00	3.59E-01	2.58E+00
Miscellaneous Plastics Products	2.99E+00	1.25	1.00E-02	1.61E+00	0.00E+00	1.62E+00	0.00E+00	1.12E+00	0.00E+00	1.12E+00	2.73E+00

**Table 6 - 32 Base Year 1990 National Emission Estimates for
Methylene Diphenyl Diisocyanate**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Polymers & Resins (I, II, and IV)	2.77E+00	1.16	2.73E-01	1.48E+00	0.00E+00	1.76E+00	5.00E-03	2.50E-01	0.00E+00	2.55E-01	2.01E+00
Aluminum Foundries	2.25E+00	0.94	0.00E+00	2.25E+00	0.00E+00	2.25E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E+00
Industrial Inorganic Chemical Manufacturing	2.12E+00	0.89	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Plywood/Particle Board Manufacturing	1.55E+00	0.65	1.21E-01	3.10E-03	0.00E+00	1.24E-01	4.85E-01	1.24E-02	0.00E+00	4.98E-01	6.22E-01
Printing, Coating, and Dyeing of Fabrics	1.38E+00	0.58	7.50E-01	0.00E+00	0.00E+00	7.50E-01	1.28E-01	0.00E+00	0.00E+00	1.28E-01	8.77E-01
Power Transmission Equipment	1.23E+00	0.51	2.50E-01	0.00E+00	0.00E+00	2.50E-01	0.00E+00	9.83E-01	0.00E+00	9.83E-01	1.23E+00
Unsupported Plastics Profile Shapes	1.04E+00	0.43	0.00E+00	1.00E+00	0.00E+00	1.00E+00	0.00E+00	3.55E-02	0.00E+00	3.55E-02	1.04E+00
Soap and Other Detergents Manufacturing	1.00E+00	0.42	0.00E+00	1.00E+00	0.00E+00	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00
Paints and Allied Products Manufacturing	8.98E-01	0.37	1.00E-03	8.85E-01	0.00E+00	8.86E-01	0.00E+00	4.00E-03	0.00E+00	4.00E-03	8.90E-01
Construction Machinery Manufacturing	8.75E-01	0.37	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	3.75E-01
Adhesives and Sealants	7.66E-01	0.32	0.00E+00	4.74E-01	0.00E+00	4.74E-01	2.50E-01	0.00E+00	0.00E+00	2.50E-01	7.24E-01
Chemicals and Allied Products Manufacturing	6.86E-01	0.29	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aluminum Extruded Products	6.72E-01	0.28	7.50E-03	0.00E+00	0.00E+00	7.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E-03
Rubber and Plastic Hose and Belting Manufacturing	5.60E-01	0.23	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.60E-01	0.00E+00	0.00E+00	5.60E-01	5.60E-01
Ordnance and Accessories Manufacturing	5.00E-01	0.21	5.00E-04	5.00E-01	0.00E+00	5.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-01
Miscellaneous Chemical Products (2890)	5.00E-01	0.21	0.00E+00	5.00E-01	0.00E+00	5.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-01
Custom Compound Purchased Resins Manufacturing	3.85E-01	0.16	0.00E+00	3.83E-01	0.00E+00	3.83E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.83E-01

**Table 6 - 32 Base Year 1990 National Emission Estimates for
Methylene Diphenyl Diisocyanate**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Fabricated Rubber Products, nec	3.83E-01	0.16	0.00E+00	5.00E-03	0.00E+00	5.00E-03	3.75E-01	0.00E+00	0.00E+00	3.75E-01	3.80E-01
Rubber & Misc. Plastic Products	3.75E-01	0.16	0.00E+00	3.75E-01	0.00E+00	3.75E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-01
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	3.66E-01	0.15	3.66E-01	0.00E+00	0.00E+00	3.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.66E-01
Aerospace Industries	2.55E-01	0.11	2.55E-01	0.00E+00	0.00E+00	2.55E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-01
Chemical Preparations	2.53E-01	0.11	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Metal Coil (Surface Coating)	2.50E-01	0.10	1.11E-01	8.35E-03	0.00E+00	1.19E-01	6.66E-02	5.02E-03	0.00E+00	7.17E-02	1.91E-01
Stainless and Non-stainless Steel Manufacture - EAF	2.50E-01	0.10	1.68E-01	1.44E-02	0.00E+00	1.82E-01	4.66E-02	5.55E-03	0.00E+00	5.21E-02	2.34E-01
Agricultural Chemicals and Pesticides	2.25E-01	0.09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-01	0.00E+00	0.00E+00	2.25E-01	2.25E-01
Softwood Veneer and Plywood	1.66E-01	0.07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-01	0.00E+00	1.66E-01	1.66E-01
Mineral Wool Manufacturing (not subject to Mineral Wool Production MACT)	1.28E-01	0.05	0.00E+00	1.28E-01	0.00E+00	1.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01
Aluminum Die-Castings	1.25E-01	0.05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aluminum Foundries (Castings)	1.25E-01	0.05	1.25E-01	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Fabricated Pipe and Fittings	1.25E-01	0.05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Printing/Publishing (Surface Coating)	1.25E-01	0.05	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Pumps and Pumping Equipment Manufacturing	1.25E-01	0.05	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Radio and Television Communications Equipment (3663)	1.25E-01	0.05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	1.25E-01	1.25E-01
Valves and Pipe Fittings Manufacturing	1.25E-01	0.05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	1.25E-01	1.25E-01

**Table 6 - 32 Base Year 1990 National Emission Estimates for
Methylene Diphenyl Diisocyanate**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	1.05E-01	0.04	1.05E-01	0.00E+00	0.00E+00	1.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-01
Reconstituted Wood Products	7.45E-02	0.03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Roofing, Siding, And Sheet Metal Work	6.55E-02	0.03	0.00E+00	6.55E-02	0.00E+00	6.55E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.55E-02
Tire Cord And Fabrics	2.80E-02	0.01	0.00E+00	2.80E-02	0.00E+00	2.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-02
Paper and Other Webs (Surface Coating)	2.50E-02	0.01	0.00E+00	2.50E-02	0.00E+00	2.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-02
Tires and Inner Tubes (not subject to Tire Production MACT)	5.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03	0.00E+00	0.00E+00	5.00E-03	5.00E-03
Upholstered Household Furniture	5.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	2.50E-03	2.50E-03
Electrical Equipment and Supplies, nec	2.50E-03	< 0.01	2.50E-03	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Engineering, Laboratory, Scientific and Research	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fabricated Rubber Products Manufacturing	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Hand and Edge Tools Manufacturing	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Industrial Patterns	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Lubricating Oils and Greases	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Miscellaneous Fabricated Metal Products	2.50E-03	< 0.01	2.50E-03	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Railroad Equipment Manufacturing	2.50E-03	< 0.01	2.50E-03	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Metal Barrels, Drums, and Pails Manufacturing	5.00E-04	< 0.01	5.00E-04	0.00E+00	0.00E+00	5.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-04
Nonferrous Wire Drawing and Insulating	5.00E-04	< 0.01	5.00E-04	0.00E+00	0.00E+00	5.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-04

Table 6 - 33 Base Year 1990 National Emission Estimates for Nickel Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Utility Boilers - Oil	3.89E+02	31.23	2.24E+02	9.61E+01	0.00E+00	3.20E+02	3.74E+01	1.60E+01	0.00E+00	5.34E+01	3.74E+02
Institutional/Commercial Heating	1.14E+02	9.18	0.00E+00	8.92E+01	0.00E+00	8.92E+01	0.00E+00	1.49E+01	0.00E+00	1.49E+01	1.04E+02
Petroleum Refineries: Catalytic Cracking (Fluid and other) Units, Catalytic Reforming Units, and Sulfur Plant Units	1.02E+02	8.17	6.18E+01	0.00E+00	0.00E+00	6.18E+01	2.54E+01	0.00E+00	0.00E+00	2.54E+01	8.72E+01
Industrial Boilers	9.52E+01	7.64	4.54E+01	1.83E+01	0.00E+00	6.37E+01	1.02E+01	4.11E+00	0.00E+00	1.43E+01	7.80E+01
Mobile Sources: Non-Road Vehicles and Equipment - Commercial Marine Vessels	6.64E+01	5.33	0.00E+00	0.00E+00	6.64E+01	6.64E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.64E+01
Utility Boilers - Coal	4.80E+01	3.85	1.85E+01	0.00E+00	0.00E+00	1.85E+01	1.21E+01	0.00E+00	0.00E+00	1.21E+01	3.06E+01
Fabricated Plate Work (Boiler Shops)	2.82E+01	2.26	1.69E+01	1.06E+01	0.00E+00	2.75E+01	0.00E+00	1.44E-01	0.00E+00	1.44E-01	2.76E+01
Tanks and Tank Components Manufacturing	2.70E+01	2.17	4.50E-03	0.00E+00	0.00E+00	4.50E-03	2.70E+01	0.00E+00	0.00E+00	2.70E+01	2.70E+01
Municipal Waste Combustors	2.31E+01	1.86	1.47E+01	7.76E-01	0.00E+00	1.55E+01	4.14E+00	2.18E-01	0.00E+00	4.35E+00	1.99E+01
Aerospace Industries	1.94E+01	1.55	1.57E+01	1.22E+00	0.00E+00	1.69E+01	2.46E-01	5.01E-03	0.00E+00	2.51E-01	1.72E+01
Steel Pipe and Tubes Manufacturing	1.86E+01	1.49	1.76E+01	1.35E-01	0.00E+00	1.77E+01	1.25E-01	6.25E-01	0.00E+00	7.50E-01	1.84E+01
Stainless and Non-stainless Steel Manufacture - EAF	1.85E+01	1.48	1.24E+01	1.06E+00	0.00E+00	1.35E+01	3.45E+00	4.10E-01	0.00E+00	3.86E+00	1.73E+01
Primary Nonferrous Metals Production	1.64E+01	1.31	0.00E+00	1.48E-01	0.00E+00	1.48E-01	1.60E+01	0.00E+00	0.00E+00	1.60E+01	1.61E+01
Mobile Sources: On- Road Vehicles	1.57E+01	1.26	0.00E+00	0.00E+00	7.75E+00	7.75E+00	0.00E+00	0.00E+00	2.66E+00	2.66E+00	1.04E+01
Petroleum Refining (not subject to Petroleum Refining MACT)	1.43E+01	1.15	7.76E+00	6.61E-01	0.00E+00	8.42E+00	5.79E+00	0.00E+00	0.00E+00	5.79E+00	1.42E+01
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	1.30E+01	1.05	1.30E+01	1.75E-02	0.00E+00	1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E+01
Mobile Sources: Non-Road Vehicles and Equipment - Other	1.29E+01	1.04	0.00E+00	0.00E+00	8.95E+00	8.95E+00	0.00E+00	0.00E+00	1.83E+00	1.83E+00	1.08E+01

Table 6 - 33 Base Year 1990 National Emission Estimates for Nickel Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Industrial Inorganic Chemical Manufacturing	1.26E+01	1.01	2.54E+00	9.69E+00	0.00E+00	1.22E+01	1.00E-03	3.80E-01	0.00E+00	3.81E-01	1.26E+01
Pulp and Paper Production (combustion) MACT II	1.20E+01	0.96	2.22E+00	0.00E+00	0.00E+00	2.22E+00	4.11E+00	0.00E+00	0.00E+00	4.11E+00	6.33E+00
Blast Furnaces and Steel Mills	1.10E+01	0.88	5.48E+00	2.42E+00	0.00E+00	7.90E+00	1.10E-02	1.56E-01	0.00E+00	1.67E-01	8.07E+00
Plating And Polishing	9.75E+00	0.78	1.64E+00	6.68E+00	0.00E+00	8.33E+00	0.00E+00	3.88E-01	0.00E+00	3.88E-01	8.72E+00
Machine tools, Metal Forming Types	9.49E+00	0.76	8.79E+00	0.00E+00	0.00E+00	8.79E+00	0.00E+00	7.03E-01	0.00E+00	7.03E-01	9.49E+00
Steel Foundries	9.14E+00	0.73	1.10E+00	6.05E+00	0.00E+00	7.15E+00	2.16E-01	9.34E-01	0.00E+00	1.15E+00	8.30E+00
Nonferrous Rolling and Drawing	9.08E+00	0.73	8.76E+00	3.11E-01	0.00E+00	9.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.08E+00
Plastic Parts and Products (Surface Coating)	7.72E+00	0.62	9.09E-01	1.85E+00	0.00E+00	2.76E+00	1.23E+00	9.04E-01	0.00E+00	2.14E+00	4.90E+00
Iron and Steel Forging	7.45E+00	0.60	1.41E-01	6.49E+00	0.00E+00	6.63E+00	1.47E-01	2.90E-01	0.00E+00	4.38E-01	7.07E+00
Primary Copper Smelting	6.87E+00	0.55	8.35E-01	3.09E-01	0.00E+00	1.14E+00	2.80E+00	1.04E+00	0.00E+00	3.84E+00	4.98E+00
Secondary Nonferrous Metals Production	6.63E+00	0.53	9.40E-01	5.52E+00	0.00E+00	6.46E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.46E+00
Primary Metal Products Manufacturing	5.99E+00	0.48	0.00E+00	5.21E+00	0.00E+00	5.21E+00	0.00E+00	6.03E-01	0.00E+00	6.03E-01	5.81E+00
Motor and Generators Manufacturing	5.72E+00	0.46	0.00E+00	5.72E+00	0.00E+00	5.72E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.72E+00
Iron Foundries	4.99E+00	0.40	1.07E+00	1.58E+00	0.00E+00	2.65E+00	4.21E-01	6.59E-01	0.00E+00	1.08E+00	3.73E+00
Large Appliance (Surface Coating)	4.89E+00	0.39	3.32E+00	6.59E-01	0.00E+00	3.98E+00	5.05E-01	8.50E-03	0.00E+00	5.13E-01	4.49E+00
Fabricated Structural Metal Manufacturing	4.56E+00	0.37	0.00E+00	1.26E+00	0.00E+00	1.26E+00	1.25E-01	2.87E+00	0.00E+00	2.99E+00	4.26E+00
Oil and Gas Field Machinery Manufacturing	4.08E+00	0.33	2.50E-03	3.83E+00	0.00E+00	3.83E+00	0.00E+00	1.28E-01	0.00E+00	1.28E-01	3.96E+00

Table 6 - 33 Base Year 1990 National Emission Estimates for Nickel Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Pumps and Pumping Equipment Manufacturing	3.87E+00	0.31	0.00E+00	3.57E+00	0.00E+00	3.57E+00	0.00E+00	3.65E-02	0.00E+00	3.65E-02	3.61E+00
Fabricated Metal Products, nec	3.38E+00	0.27	5.08E-01	1.88E+00	0.00E+00	2.39E+00	5.00E-03	3.31E-01	0.00E+00	3.36E-01	2.73E+00
Electrometallurgical Products Manufacturing	3.27E+00	0.26	0.00E+00	1.87E+00	0.00E+00	1.87E+00	0.00E+00	6.73E-01	0.00E+00	6.73E-01	2.55E+00
Speed Changers, Drives, and Gears	3.09E+00	0.25	0.00E+00	4.03E-01	0.00E+00	4.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.03E-01
Hazardous Waste Incineration	2.51E+00	0.20	1.32E+00	0.00E+00	0.00E+00	1.32E+00	5.05E-01	0.00E+00	0.00E+00	5.05E-01	1.83E+00
Coke By-Product Plants	2.42E+00	0.19	1.81E+00	0.00E+00	0.00E+00	1.81E+00	3.46E-01	0.00E+00	0.00E+00	3.46E-01	2.16E+00
MON	2.18E+00	0.18	1.58E+00	1.60E-02	0.00E+00	1.60E+00	2.57E-01	2.59E-03	0.00E+00	2.59E-01	1.86E+00
Industrial Organic Chemicals Manufacturing	2.16E+00	0.17	2.02E+00	1.36E-01	0.00E+00	2.16E+00	5.00E-04	5.00E-04	0.00E+00	1.00E-03	2.16E+00
Valves and Pipe Fittings Manufacturing	1.91E+00	0.15	1.29E-01	1.14E+00	0.00E+00	1.27E+00	0.00E+00	1.27E-01	0.00E+00	1.27E-01	1.40E+00
Chemical Preparations	1.89E+00	0.15	1.33E-01	1.34E+00	0.00E+00	1.47E+00	0.00E+00	1.28E-01	0.00E+00	1.28E-01	1.60E+00
Tire Production	1.80E+00	0.14	6.13E-01	6.19E-03	0.00E+00	6.19E-01	7.25E-01	7.32E-03	0.00E+00	7.32E-01	1.35E+00
Telephone and Telegraph Apparatus	1.77E+00	0.14	2.30E-02	0.00E+00	0.00E+00	2.30E-02	0.00E+00	1.75E+00	0.00E+00	1.75E+00	1.77E+00
Metal Furniture (Surface Coating)	1.76E+00	0.14	2.50E-01	2.55E-01	0.00E+00	5.05E-01	2.50E-01	6.30E-01	0.00E+00	8.80E-01	1.38E+00
Heating Equipment, Except Electric	1.75E+00	0.14	0.00E+00	1.63E+00	0.00E+00	1.63E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	1.63E+00
Automotive stampings	1.65E+00	0.13	3.75E-01	7.71E-01	0.00E+00	1.15E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.27E+00
Power Driven Handtools	1.50E+00	0.12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Copper Rolling and Drawing	1.47E+00	0.12	1.90E-01	1.03E+00	0.00E+00	1.22E+00	2.50E-01	0.00E+00	0.00E+00	2.50E-01	1.47E+00

Table 6 - 33 Base Year 1990 National Emission Estimates for Nickel Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Sewage Sludge Incineration	1.44E+00	0.12	0.00E+00	1.19E+00	0.00E+00	1.19E+00	0.00E+00	1.90E-01	0.00E+00	1.90E-01	1.38E+00
Burial Caskets	1.41E+00	0.11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aluminum Foundries	1.40E+00	0.11	0.00E+00	9.92E-01	0.00E+00	9.92E-01	0.00E+00	1.55E-01	0.00E+00	1.55E-01	1.15E+00
Steel Wire and Related Products Manufacturing	1.39E+00	0.11	1.25E-01	2.55E-01	0.00E+00	3.80E-01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	5.05E-01
Nonferrous Foundries, nec	1.39E+00	0.11	6.50E-03	1.00E+00	0.00E+00	1.01E+00	2.50E-01	0.00E+00	0.00E+00	2.50E-01	1.26E+00
Residential Heating: Distillate Oil Combustion	1.27E+00	0.10	0.00E+00	8.81E-01	0.00E+00	8.81E-01	0.00E+00	1.80E-01	0.00E+00	1.80E-01	1.06E+00
Electrical Equipment and Supplies, nec	1.26E+00	0.10	0.00E+00	1.01E+00	0.00E+00	1.01E+00	0.00E+00	2.50E-01	0.00E+00	2.50E-01	1.26E+00
Construction Machinery Manufacturing	1.21E+00	0.10	5.08E-01	3.78E-01	0.00E+00	8.85E-01	1.26E-01	2.00E-01	0.00E+00	3.26E-01	1.21E+00
Brass, Bronze, Copper, Copper Base Alloy Foundries	1.13E+00	0.09	0.00E+00	8.77E-01	0.00E+00	8.77E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.77E-01
Miscellaneous Fabricated Metal Products	1.03E+00	0.08	3.75E-01	6.58E-01	0.00E+00	1.03E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E+00
Clay Products Manufacturing	1.02E+00	0.08	0.00E+00	1.28E-01	0.00E+00	1.28E-01	0.00E+00	1.93E-01	0.00E+00	1.93E-01	3.21E-01
Miscellaneous Fabricated Wire Products	1.01E+00	0.08	1.25E-01	5.12E-01	0.00E+00	6.37E-01	0.00E+00	2.53E-01	0.00E+00	2.53E-01	8.89E-01
Internal Combustion Engine Manufacturing	9.70E-01	0.08	7.66E-01	1.25E-01	0.00E+00	8.91E-01	7.30E-02	0.00E+00	0.00E+00	7.30E-02	9.64E-01
Sheet Metal Work	9.15E-01	0.07	2.50E-01	2.88E-01	0.00E+00	5.38E-01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	7.88E-01
Hoists, Cranes, and Monorails	9.02E-01	0.07	9.02E-01	0.00E+00	0.00E+00	9.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.02E-01
Storage Batteries Manufacturing	8.96E-01	0.07	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	7.71E-01	0.00E+00	7.71E-01	8.96E-01
Paper Industries Machinery	8.72E-01	0.07	5.00E-03	3.75E-01	0.00E+00	3.80E-01	2.55E-01	2.36E-01	0.00E+00	4.91E-01	8.71E-01

Table 6 - 33 Base Year 1990 National Emission Estimates for Nickel Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Metal Stampings Manufacturing	8.35E-01	0.07	7.50E-03	2.23E-01	0.00E+00	2.30E-01	0.00E+00	3.52E-01	0.00E+00	3.52E-01	5.83E-01
Hardware Manufacturing	8.18E-01	0.07	4.25E-01	2.50E-01	0.00E+00	6.75E-01	1.27E-01	8.00E-03	0.00E+00	1.35E-01	8.11E-01
Copper Foundries	7.86E-01	0.06	0.00E+00	2.84E-01	0.00E+00	2.84E-01	0.00E+00	5.02E-01	0.00E+00	5.02E-01	7.86E-01
Ball and Roller Bearings Manufacturing	7.84E-01	0.06	0.00E+00	2.95E-02	0.00E+00	2.95E-02	1.25E-01	2.50E-01	0.00E+00	3.75E-01	4.04E-01
Electronic Components, nec	7.83E-01	0.06	2.50E-03	2.80E-02	0.00E+00	3.05E-02	0.00E+00	2.50E-03	0.00E+00	2.50E-03	3.30E-02
Special Dies, Tools, Jigs and Fixtures	7.82E-01	0.06	0.00E+00	5.30E-01	0.00E+00	5.30E-01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	6.55E-01
Motor Vehicle Equipment	7.21E-01	0.06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.94E-01	0.00E+00	0.00E+00	5.94E-01	5.94E-01
Cold Finishing of Steel Shapes	7.19E-01	0.06	2.50E-03	4.66E-01	0.00E+00	4.69E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.69E-01
Nonferrous forgings	6.94E-01	0.06	5.25E-02	2.67E-01	0.00E+00	3.19E-01	0.00E+00	3.75E-01	0.00E+00	3.75E-01	6.94E-01
Plumbing Fixture Fittings and Trim	6.80E-01	0.05	0.00E+00	3.05E-01	0.00E+00	3.05E-01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	5.55E-01
Turbines and Turbine Generator Sets	6.35E-01	0.05	3.77E-01	1.30E-01	0.00E+00	5.07E-01	0.00E+00	1.27E-01	0.00E+00	1.27E-01	6.35E-01
Inorganic Pigments Manufacturing	6.34E-01	0.05	0.00E+00	2.25E-01	0.00E+00	2.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-01
General Industrial Machinery Manufacturing	6.31E-01	0.05	1.26E-01	5.00E-01	0.00E+00	6.26E-01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	6.31E-01
Nonferrous Die-castings, Except Aluminum	6.30E-01	0.05	0.00E+00	3.75E-01	0.00E+00	3.75E-01	5.00E-03	2.50E-01	0.00E+00	2.55E-01	6.30E-01
Carburetors, Pistons, Rings and Valves Manufacturing	6.30E-01	0.05	1.27E-01	2.50E-01	0.00E+00	3.77E-01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	6.27E-01
Metal Valves	6.29E-01	0.05	0.00E+00	1.28E-01	0.00E+00	1.28E-01	0.00E+00	3.00E-02	0.00E+00	3.00E-02	1.58E-01
Shipbuilding and Ship Repair (Surface Coating)	5.68E-01	0.05	4.24E-01	8.66E-03	0.00E+00	4.33E-01	8.25E-02	1.68E-03	0.00E+00	8.42E-02	5.17E-01

Table 6 - 33 Base Year 1990 National Emission Estimates for Nickel Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Mining Machinery Manufacturing	5.66E-01	0.05	0.00E+00	1.91E-01	0.00E+00	1.91E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E-01
Engine Electric Equipment	5.46E-01	0.04	2.88E-01	1.25E-01	0.00E+00	4.13E-01	1.25E-01	0.00E+00	0.00E+00	1.25E-01	5.38E-01
Medical Waste Incinerators	5.37E-01	0.04	3.75E-02	2.12E-01	0.00E+00	2.50E-01	1.84E-02	1.04E-01	0.00E+00	1.23E-01	3.72E-01
Paints and Allied Products Manufacturing	5.30E-01	0.04	3.99E-01	1.30E-01	0.00E+00	5.30E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.30E-01
Manufacturing Industries, nec	5.29E-01	0.04	2.50E-01	2.79E-01	0.00E+00	5.29E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.29E-01
Aluminum Die-Castings	5.16E-01	0.04	0.00E+00	1.15E-02	0.00E+00	1.15E-02	0.00E+00	4.50E-02	0.00E+00	4.50E-02	5.65E-02
Conveyors and Conveying Equipment Manufacturing	5.14E-01	0.04	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.05E-02	3.75E-01	0.00E+00	3.86E-01	5.10E-01
Fasteners, Buttons, Needles, and Pins	5.05E-01	0.04	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Primary Copper (not subject to Primary Copper Smelting MACT)	5.05E-01	0.04	0.00E+00	2.55E-01	0.00E+00	2.55E-01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	5.05E-01
Metal Sanitary Ware Manufacturing	5.00E-01	0.04	0.00E+00	3.75E-01	0.00E+00	3.75E-01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	5.00E-01
Steel and Iron Reclamation- Auto Scrap Burning	5.00E-01	0.04	0.00E+00	5.00E-01	0.00E+00	5.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-01
Integrated Iron and Steel Manufacturing	4.96E-01	0.04	4.47E-01	0.00E+00	0.00E+00	4.47E-01	4.89E-02	0.00E+00	0.00E+00	4.89E-02	4.96E-01
Aluminum Extruded Products	4.28E-01	0.03	2.55E-02	3.99E-01	0.00E+00	4.25E-01	0.00E+00	3.00E-03	0.00E+00	3.00E-03	4.28E-01
Hand and Edge Tools Manufacturing	4.06E-01	0.03	0.00E+00	2.85E-02	0.00E+00	2.85E-02	0.00E+00	2.53E-01	0.00E+00	2.53E-01	2.81E-01
Metal coating and allied services (3479)	4.06E-01	0.03	7.50E-03	3.91E-01	0.00E+00	3.98E-01	0.00E+00	3.00E-03	0.00E+00	3.00E-03	4.01E-01
Metal Coil (Surface Coating)	3.87E-01	0.03	1.72E-01	1.29E-02	0.00E+00	1.85E-01	1.03E-01	7.76E-03	0.00E+00	1.11E-01	2.96E-01
Aluminum Foundries (Castings)	3.85E-01	0.03	0.00E+00	2.60E-01	0.00E+00	2.60E-01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	3.85E-01

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112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Glass Containers	3.85E-01	0.03	0.00E+00	2.60E-01	0.00E+00	2.60E-01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	3.85E-01
Blowers and Fans	3.82E-01	0.03	0.00E+00	9.50E-03	0.00E+00	9.50E-03	1.20E-01	2.53E-01	0.00E+00	3.73E-01	3.82E-01
Surgical and Medical Instruments Manufacturing	3.80E-01	0.03	2.55E-01	1.25E-01	0.00E+00	3.80E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.80E-01
Nonclay Refractories (not subject to Refractories Manufacturing MACT)	3.75E-01	0.03	0.00E+00	3.75E-01	0.00E+00	3.75E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-01
Boat Manufacturing	3.65E-01	0.03	2.67E-01	0.00E+00	0.00E+00	2.67E-01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	2.72E-01
Residential Heating: Wood/Wood Residue Combustion	3.55E-01	0.03	0.00E+00	2.45E-01	0.00E+00	2.45E-01	0.00E+00	5.32E-02	0.00E+00	5.32E-02	2.98E-01
Industrial Machinery, nec	3.30E-01	0.03	5.00E-03	2.58E-01	0.00E+00	2.63E-01	6.40E-02	0.00E+00	0.00E+00	6.40E-02	3.27E-01
Magnetic and Optical Recording Media Manufacturing	2.91E-01	0.02	2.50E-01	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Bolts, Nuts, Rivets and Washers Manufacturing	2.76E-01	0.02	2.71E-01	5.00E-03	0.00E+00	2.76E-01	5.00E-04	0.00E+00	0.00E+00	5.00E-04	2.76E-01
Residential Heating: Bituminous and Lignite Coal Combustion	2.71E-01	0.02	0.00E+00	1.88E-01	0.00E+00	1.88E-01	0.00E+00	3.84E-02	0.00E+00	3.84E-02	2.26E-01
Soap and Other Detergents Manufacturing	2.68E-01	0.02	1.75E-02	2.50E-01	0.00E+00	2.68E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-01
Polymers & Resins (I, II, and IV)	2.65E-01	0.02	1.32E-01	2.50E-03	0.00E+00	1.35E-01	5.00E-04	5.00E-03	0.00E+00	5.50E-03	1.40E-01
Custom Compound Purchased Resins Manufacturing	2.61E-01	0.02	0.00E+00	1.28E-01	0.00E+00	1.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01
Nitrogenous Fertilizers	2.60E-01	0.02	2.60E-01	0.00E+00	0.00E+00	2.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.60E-01
Process Control Instruments	2.60E-01	0.02	2.50E-03	2.57E-01	0.00E+00	2.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.60E-01
Fabricated Pipe and Fittings	2.58E-01	0.02	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Industrial Furnaces and Ovens	2.58E-01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-01	0.00E+00	1.30E-01	1.30E-01

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112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	
Pressed and Blown Glass and Glassware Manufacturing	2.58E-01	0.02	0.00E+00	1.28E-01	0.00E+00	1.28E-01	0.00E+00	1.28E-01	0.00E+00	1.28E-01	2.55E-01
Farm Machinery and Equipment Manufacturing	2.56E-01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-01	5.00E-04	0.00E+00	2.53E-01	2.53E-01
Machine Tool Accessories	2.55E-01	0.02	0.00E+00	2.55E-01	0.00E+00	2.55E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-01
Engineering, Laboratory, Scientific and Research	2.53E-01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01	2.50E-03	0.00E+00	2.53E-01	2.53E-01
Metalworking Machinery	2.53E-01	0.02	0.00E+00	2.53E-01	0.00E+00	2.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-01
Electrical Housewares and Fans	2.50E-01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Environmental Controls Manufacturing	2.50E-01	0.02	1.25E-01	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Instruments to Measure Electricity	2.50E-01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	2.50E-01	2.50E-01
Lead Pencils, Art Goods Manufacturing	2.50E-01	0.02	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Metal Doors, Sash, and Trim	2.50E-01	0.02	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Metal Services, nec	2.50E-01	0.02	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Railroad Equipment Manufacturing	2.50E-01	0.02	1.28E-01	0.00E+00	0.00E+00	1.28E-01	2.50E-03	0.00E+00	0.00E+00	2.50E-03	1.30E-01
Reinforced Plastic Composites Production	2.40E-01	0.02	1.33E-01	2.01E-02	0.00E+00	1.53E-01	5.38E-02	8.11E-03	0.00E+00	6.19E-02	2.15E-01
Special Industry Machinery, nec	2.37E-01	0.02	1.20E-02	2.26E-01	0.00E+00	2.38E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-01
Primary Lead Smelting	2.10E-01	0.02	1.40E-01	0.00E+00	0.00E+00	1.40E-01	6.98E-02	0.00E+00	0.00E+00	6.98E-02	2.09E-01
Welding Apparatus	1.90E-01	0.02	0.00E+00	1.90E-01	0.00E+00	1.90E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E-01
Secondary Lead Smelting	1.73E-01	0.01	1.20E-01	1.04E-02	0.00E+00	1.30E-01	2.45E-03	2.13E-04	0.00E+00	2.66E-03	1.33E-01

Table 6 - 33 Base Year 1990 National Emission Estimates for Nickel Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Fabricated Structural Metal Products	1.67E-01	0.01	0.00E+00	1.40E-01	0.00E+00	1.40E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-01
Machine tools, Metal Cutting Types	1.55E-01	0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	1.50E-01	0.00E+00	1.50E-01	1.53E-01
Food Products Machinery	1.44E-01	0.01	1.10E-02	1.33E-01	0.00E+00	1.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-01
Transformers, Except Electronic	1.38E-01	0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	1.33E-01	0.00E+00	0.00E+00	1.33E-01	1.38E-01
Miscellaneous Plastics Products	1.35E-01	0.01	0.00E+00	1.00E-02	0.00E+00	1.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02
Cutlery	1.33E-01	0.01	5.00E-03	2.50E-03	0.00E+00	7.50E-03	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.33E-01
Metal Heat Treating Manufacturing	1.30E-01	0.01	0.00E+00	1.30E-01	0.00E+00	1.30E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-01
Plastics Products Inc. Plastic Bottles	1.30E-01	0.01	0.00E+00	1.30E-01	0.00E+00	1.30E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-01
Utility Boilers - Coke	1.30E-01	0.01	9.75E-02	0.00E+00	0.00E+00	9.75E-02	1.86E-02	0.00E+00	0.00E+00	1.86E-02	1.16E-01
Open Burning: Scrap Tires	1.29E-01	0.01	0.00E+00	8.77E-02	0.00E+00	8.77E-02	0.00E+00	2.06E-02	0.00E+00	2.06E-02	1.08E-01
Air and Gas Compressors	1.28E-01	0.01	1.25E-01	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Cathode Ray Television Picture Tubes Manufacturing	1.28E-01	0.01	0.00E+00	1.28E-01	0.00E+00	1.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01
Edible Fats and Oils, nec	1.28E-01	0.01	1.25E-01	2.50E-03	0.00E+00	1.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01
Lighting Equipment	1.28E-01	0.01	0.00E+00	1.28E-01	0.00E+00	1.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01
Miscellaneous Manufactures (3990)	1.28E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Primary Aluminum Production	1.28E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Switchgear and Switchboard Apparatus	1.28E-01	0.01	2.50E-03	1.25E-01	0.00E+00	1.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01

Table 6 - 33 Base Year 1990 National Emission Estimates for Nickel Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Welding Apparatus, Electric	1.26E-01	0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Electrical Apparatus and Equipment	1.25E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fabricated Metal Products Manufacturing	1.25E-01	0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Fluid Power Valves and Hose Fittings Manufacturing	1.25E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heavy Construction, Nec	1.25E-01	0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Lawn and Garden Equipment	1.25E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.25E-01
Manifold Business Forms	1.25E-01	0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Metal Forgings and Stampings	1.25E-01	0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Rolling Mill Machinery	1.25E-01	0.01	1.25E-01	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Space Research and Technology	1.25E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.25E-01
Wood Furniture (Surface Coating)	1.25E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Men's And Boys' Suits And Coats	1.16E-01	0.01	1.16E-01	0.00E+00	0.00E+00	1.16E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-01
Residential Heating: Anthracite Coal Combustion	1.02E-01	0.01	0.00E+00	7.08E-02	0.00E+00	7.08E-02	0.00E+00	1.44E-02	0.00E+00	1.44E-02	8.52E-02
Printing, Coating, and Dyeing of Fabrics	6.55E-02	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-04	0.00E+00	5.00E-04	5.00E-04
Meat Packing Plants	6.00E-02	< 0.01	6.00E-02	0.00E+00	0.00E+00	6.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.00E-02
Mineral Wool Production	5.00E-02	< 0.01	2.33E-02	0.00E+00	0.00E+00	2.33E-02	1.33E-02	0.00E+00	0.00E+00	1.33E-02	3.67E-02
Fluid Power Pumps and Motors	4.50E-02	< 0.01	0.00E+00	4.50E-02	0.00E+00	4.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-02

Table 6 - 33 Base Year 1990 National Emission Estimates for Nickel Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Surface Active Agents Manufacturing	4.25E-02	< 0.01	4.25E-02	0.00E+00	0.00E+00	4.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.25E-02
Screw Machine Products Manufacturing	3.20E-02	< 0.01	2.50E-03	2.45E-02	0.00E+00	2.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-02
Aluminum Sheet, Plate, and Foil manufacturing	2.90E-02	< 0.01	2.90E-02	0.00E+00	0.00E+00	2.90E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E-02
Animal Cremation	2.04E-02	< 0.01	0.00E+00	1.18E-02	0.00E+00	1.18E-02	0.00E+00	3.26E-03	0.00E+00	3.26E-03	1.51E-02
Miscellaneous Metal Work	1.75E-02	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Electronic Connectors	1.05E-02	< 0.01	5.00E-04	5.00E-03	0.00E+00	5.50E-03	5.00E-03	0.00E+00	0.00E+00	0.00E+00	1.05E-02
Cement, Hydraulic (not subject to Portland Cement MACT)	1.00E-02	< 0.01	0.00E+00	7.50E-03	0.00E+00	7.50E-03	0.00E+00	2.50E-03	0.00E+00	2.50E-03	1.00E-02
Malt Beverages	9.50E-03	< 0.01	9.50E-03	0.00E+00	0.00E+00	9.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.50E-03
Nonferrous Wire Drawing and Insulating	7.50E-03	< 0.01	0.00E+00	7.50E-03	0.00E+00	7.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E-03
Ordnance and Accessories Manufacturing	7.50E-03	< 0.01	5.00E-03	0.00E+00	0.00E+00	5.00E-03	2.50E-03	0.00E+00	0.00E+00	2.50E-03	7.50E-03
Human Cremation	7.00E-03	< 0.01	0.00E+00	4.86E-03	0.00E+00	4.86E-03	0.00E+00	9.91E-04	0.00E+00	9.91E-04	5.85E-03
Noncurrent-Carrying Wiring Devices	6.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	4.00E-03	0.00E+00	0.00E+00	4.00E-03	6.50E-03
Primary Battery, Dry and Wet Manufacture	5.50E-03	< 0.01	5.00E-03	0.00E+00	0.00E+00	5.00E-03	0.00E+00	5.00E-04	0.00E+00	5.00E-04	5.50E-03
Commercial Physical Research	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Fabricated Rubber Products, nec	5.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	2.50E-03
Food Products Machinery Manufacturing	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Pharmaceuticals Production	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03

Table 6 - 33 Base Year 1990 National Emission Estimates for Nickel Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Plumbing And Heating, Except Electric	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Transmitting, Industrial and Special Purpose Elect	5.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03	0.00E+00	5.00E-03	5.00E-03
Gaskets, Packing and Sealing Devices Manufacturing	3.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-03	0.00E+00	3.00E-03	3.00E-03
Paper and Other Webs (Surface Coating)	3.00E-03	< 0.01	3.00E-03	0.00E+00	0.00E+00	3.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-03
Electrical Industrial Apparatus, nec	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Electron Tubes Manufacturing	2.50E-03	< 0.01	2.50E-03	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Fluid Meters and Counting Devices	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Fluid Power Cylinders and Activators	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Household Vacuum Cleaners	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	2.50E-03	2.50E-03
Industrial Patterns Packaging machinery	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Metal Barrels, Drums, and Pails Manufacturing	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Optical Instruments and Lenses	2.50E-03	< 0.01	2.50E-03	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Silverware and Plated Ware	2.50E-03	< 0.01	2.50E-03	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Small Arms	2.50E-03	< 0.01	2.50E-03	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Small Arms Ammunition	2.50E-03	< 0.01	2.50E-03	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Steel Springs, Except Wire	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	2.50E-03
Wire Springs	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	2.50E-03

Table 6 - 33 Base Year 1990 National Emission Estimates for Nickel Compounds

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Asbestos Products Manufacturing	2.00E-03	< 0.01	2.00E-03	0.00E+00	0.00E+00	2.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-03
Saw Blades and Handsaws	2.00E-03	< 0.01	0.00E+00	2.00E-03	0.00E+00	2.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-03
Chemicals and Allied Products Manufacturing	1.00E-03	< 0.01	1.00E-03	0.00E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-03
Guided Missiles and Space Vehicles Manufacturing	1.00E-03	< 0.01	1.00E-03	0.00E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-03
Power Transmission Equipment	1.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-03	0.00E+00	1.00E-03	1.00E-03
Printing/Publishing (Surface Coating)	5.00E-04	< 0.01	0.00E+00	5.00E-04	0.00E+00	5.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-04
Textile Machinery	5.00E-04	< 0.01	0.00E+00	5.00E-04	0.00E+00	5.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-04

Table 6 - 34 Base Year 1990 National Emission Estimates for Polycyclic Organic Matter as 7-PAH

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Open Burning: Forest and Wildfires	5.38E+02	40.79	0.00E+00	3.23E+01	0.00E+00	3.23E+01	0.00E+00	8.07E+01	0.00E+00	8.07E+01	1.13E+02
Open Burning: Prescribed Burnings	4.26E+02	32.33	0.00E+00	6.39E+01	0.00E+00	6.39E+01	0.00E+00	9.38E+01	0.00E+00	9.38E+01	1.58E+02
Primary Aluminum Production	1.41E+02	10.70	1.83E+01	0.00E+00	0.00E+00	1.83E+01	4.65E+01	0.00E+00	0.00E+00	4.65E+01	6.49E+01
Coke Ovens: Charging, Top Side, and Door Leaks	7.18E+01	5.45	5.39E+01	0.00E+00	0.00E+00	5.39E+01	1.03E+01	0.00E+00	0.00E+00	1.03E+01	6.41E+01
Open Burning: Scrap Tires	5.25E+01	3.98	0.00E+00	3.57E+01	0.00E+00	3.57E+01	0.00E+00	8.40E+00	0.00E+00	8.40E+00	4.41E+01
Mobile Sources: On-Road Vehicles	3.44E+01	2.61	0.00E+00	0.00E+00	1.70E+01	1.70E+01	0.00E+00	0.00E+00	5.83E+00	5.83E+00	2.28E+01
Coke Ovens: Pushing, Quenching, and Battery Stacks	3.01E+01	2.28	2.26E+01	0.00E+00	0.00E+00	2.26E+01	4.30E+00	0.00E+00	0.00E+00	4.30E+00	2.69E+01
Mobile Sources: Non-Road Vehicles and Equipment - Other	1.38E+01	1.04	0.00E+00	0.00E+00	9.54E+00	9.54E+00	0.00E+00	0.00E+00	1.95E+00	1.95E+00	1.15E+01
Pulp and Paper Production (combustion) MACT II	3.99E+00	0.30	7.52E-01	0.00E+00	0.00E+00	7.52E-01	1.37E+00	0.00E+00	0.00E+00	1.37E+00	2.13E+00
Asphalt Roofing Manufacturing	1.68E+00	0.13	1.06E+00	1.91E-01	0.00E+00	1.25E+00	2.37E-01	4.30E-02	0.00E+00	2.80E-01	1.53E+00
Stationary Internal Combustion Engines	1.41E+00	0.11	5.66E-01	3.77E-01	0.00E+00	9.43E-01	1.27E-01	8.45E-02	0.00E+00	2.11E-01	1.15E+00
Industrial Boilers	1.32E+00	0.10	6.47E-01	1.63E-01	0.00E+00	8.10E-01	1.69E-01	4.25E-02	0.00E+00	2.12E-01	1.02E+00
Residential Heating: Wood/Wood Residue Combustion	5.60E-01	0.04	0.00E+00	3.86E-01	0.00E+00	3.86E-01	0.00E+00	8.40E-02	0.00E+00	8.40E-02	4.70E-01
Cigarette Smoke	5.20E-01	0.04	0.00E+00	3.61E-01	0.00E+00	3.61E-01	0.00E+00	7.36E-02	0.00E+00	7.36E-02	4.34E-01
Carbon Black Production	4.50E-01	0.03	2.72E-02	6.34E-02	0.00E+00	9.06E-02	7.80E-02	1.82E-01	0.00E+00	2.60E-01	3.50E-01
Electrometallurgical Products Manufacturing	2.60E-01	0.02	8.94E-02	1.46E-02	0.00E+00	1.04E-01	3.58E-02	5.82E-03	0.00E+00	4.16E-02	1.46E-01
Utility Boilers - Coal	2.10E-01	0.02	8.10E-02	0.00E+00	0.00E+00	8.10E-02	5.30E-02	0.00E+00	0.00E+00	5.30E-02	1.34E-01

**Table 6 - 34 Base Year 1990 National Emission Estimates for
Polycyclic Organic Matter as 7-PAH**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Asphalt Concrete Manufacturing	9.40E-02	0.01	0.00E+00	9.40E-02	0.00E+00	9.40E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.40E-02
Mobile Sources: Non-Road Vehicles and Equipment - Aircraft	9.00E-02	0.01	0.00E+00	0.00E+00	7.77E-02	7.77E-02	0.00E+00	0.00E+00	9.50E-03	9.50E-03	8.72E-02
Institutional/Commercial Heating	8.66E-02	0.01	0.00E+00	6.74E-02	0.00E+00	6.74E-02	0.00E+00	1.18E-02	0.00E+00	1.18E-02	7.93E-02
Utility Boilers - Oil	5.00E-02	< 0.01	2.88E-02	1.24E-02	0.00E+00	4.12E-02	4.80E-03	2.06E-03	0.00E+00	6.86E-03	4.80E-02
Residential Heating: Distillate Oil Combustion	3.53E-02	< 0.01	0.00E+00	2.45E-02	0.00E+00	2.45E-02	0.00E+00	5.00E-03	0.00E+00	5.00E-03	2.95E-02
Hazardous Waste Incineration	2.09E-02	< 0.01	1.10E-02	0.00E+00	0.00E+00	1.10E-02	4.19E-03	0.00E+00	0.00E+00	4.19E-03	1.52E-02
Secondary Lead Smelting	1.90E-02	< 0.01	1.32E-02	1.14E-03	0.00E+00	1.43E-02	2.69E-04	2.34E-05	0.00E+00	2.92E-04	1.46E-02
Sewage Sludge Incineration	8.67E-03	< 0.01	0.00E+00	7.15E-03	0.00E+00	7.15E-03	0.00E+00	1.14E-03	0.00E+00	1.14E-03	8.29E-03
Municipal Landfills	1.05E-03	< 0.01	7.21E-05	6.56E-04	0.00E+00	7.28E-04	1.47E-05	1.34E-04	0.00E+00	1.49E-04	8.77E-04
Residential Heating: Bituminous and Lignite Coal Combustion	3.75E-04	< 0.01	0.00E+00	2.60E-04	0.00E+00	2.60E-04	0.00E+00	5.31E-05	0.00E+00	5.31E-05	3.13E-04
Utility Boilers - Coke	1.81E-04	< 0.01	1.36E-04	0.00E+00	0.00E+00	1.36E-04	2.59E-05	0.00E+00	0.00E+00	2.59E-05	1.62E-04
Residential Heating: Anthracite Coal Combustion	1.42E-04	< 0.01	0.00E+00	9.85E-05	0.00E+00	9.85E-05	0.00E+00	2.01E-05	0.00E+00	2.01E-05	1.19E-04
Scrap Tire Combustion	2.17E-05	< 0.01	8.20E-06	0.00E+00	0.00E+00	8.20E-06	8.07E-06	0.00E+00	0.00E+00	8.07E-06	1.63E-05
Drum and Barrel Reclamation	1.27E-06	< 0.01	0.00E+00	1.27E-06	0.00E+00	1.27E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-06
Animal Cremation	4.13E-08	< 0.01	0.00E+00	2.40E-08	0.00E+00	2.40E-08	0.00E+00	6.61E-09	0.00E+00	6.61E-09	3.06E-08
Human Cremation	1.42E-08	< 0.01	0.00E+00	9.85E-09	0.00E+00	9.85E-09	0.00E+00	2.01E-09	0.00E+00	2.01E-09	1.19E-08

**Table 6 - 35 Base Year 1990 National Emission Estimates for
Polycyclic Organic Matter as 16-PAH**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Consumer Products Usage	5.73E+03	33.18	0.00E+00	3.98E+03	0.00E+00	3.98E+03	0.00E+00	8.12E+02	0.00E+00	8.12E+02	4.79E+03
Aerospace Industries	1.70E+03	9.83	1.50E+03	6.24E+01	0.00E+00	1.56E+03	8.15E+01	3.39E+00	0.00E+00	8.48E+01	1.65E+03
Open Burning: Forest and Wildfires	1.42E+03	8.20	0.00E+00	8.50E+01	0.00E+00	8.50E+01	0.00E+00	2.13E+02	0.00E+00	2.13E+02	2.98E+02
Open Burning: Prescribed Burnings	1.12E+03	6.50	0.00E+00	1.68E+02	0.00E+00	1.68E+02	0.00E+00	2.47E+02	0.00E+00	2.47E+02	4.16E+02
Pulp and Paper Production (combustion) MACT II	8.32E+02	4.82	1.57E+02	0.00E+00	0.00E+00	1.57E+02	2.86E+02	0.00E+00	0.00E+00	2.86E+02	4.43E+02
Petroleum Refineries: Other Sources Not Distinctly Listed	7.83E+02	4.53	4.68E+02	9.55E+00	0.00E+00	4.77E+02	2.01E+02	4.11E+00	0.00E+00	2.05E+02	6.83E+02
Primary Aluminum Production	6.62E+02	3.83	8.61E+01	0.00E+00	0.00E+00	8.61E+01	2.18E+02	0.00E+00	0.00E+00	2.18E+02	3.05E+02
Coke Ovens: Charging, Top Side, and Door Leaks	5.38E+02	3.12	4.04E+02	0.00E+00	0.00E+00	4.04E+02	7.69E+01	0.00E+00	0.00E+00	7.69E+01	4.81E+02
Coke Ovens: Pushing, Quenching, and Battery Stacks	5.17E+02	2.99	3.88E+02	0.00E+00	0.00E+00	3.88E+02	7.39E+01	0.00E+00	0.00E+00	7.39E+01	4.62E+02
MON	4.40E+02	2.54	3.19E+02	3.22E+00	0.00E+00	3.22E+02	5.17E+01	5.22E-01	0.00E+00	5.22E+01	3.74E+02
Gasoline Distribution Stage II	3.74E+02	2.16	2.57E+01	2.34E+02	0.00E+00	2.59E+02	5.24E+00	4.77E+01	0.00E+00	5.30E+01	3.12E+02
Gasoline Distribution (Stage 1)	3.55E+02	2.05	7.27E+00	1.38E+02	0.00E+00	1.45E+02	4.08E+00	7.75E+01	0.00E+00	8.15E+01	2.27E+02
Petroleum Refineries: Catalytic Cracking (Fluid and other) Units, Catalytic Reforming Units, and Sulfur Plant Units	3.13E+02	1.81	1.90E+02	0.00E+00	0.00E+00	1.90E+02	7.83E+01	0.00E+00	0.00E+00	7.83E+01	2.68E+02
Open Burning: Scrap Tires	2.94E+02	1.70	0.00E+00	2.00E+02	0.00E+00	2.00E+02	0.00E+00	4.71E+01	0.00E+00	4.71E+01	2.47E+02
Industrial Organic Chemicals Manufacturing	2.27E+02	1.31	5.44E+01	7.76E+00	0.00E+00	6.22E+01	1.58E+02	0.00E+00	0.00E+00	1.58E+02	2.20E+02
Fabricated Rubber Products, nec	1.48E+02	0.86	1.48E+02	0.00E+00	0.00E+00	1.48E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E+02
Industrial Boilers	1.41E+02	0.81	6.87E+01	1.73E+01	0.00E+00	8.60E+01	1.80E+01	4.53E+00	0.00E+00	2.25E+01	1.09E+02

**Table 6 - 35 Base Year 1990 National Emission Estimates for
Polycyclic Organic Matter as 16-PAH**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Plastics Foam Products Manufacturing (not subject to Plastic Parts (Surface Coating) MACT)	1.10E+02	0.64	1.10E+02	0.00E+00	0.00E+00	1.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E+02
Petroleum Refining (not subject to Petroleum Refining MACT)	1.04E+02	0.60	9.36E+01	5.17E+00	0.00E+00	9.87E+01	4.30E+00	6.60E-01	0.00E+00	4.96E+00	1.04E+02
Wood Preserving	9.04E+01	0.52	0.00E+00	3.44E+01	0.00E+00	3.44E+01	0.00E+00	1.90E+01	0.00E+00	1.90E+01	5.34E+01
Publicly Owned Treatment Works (POTW) Emissions	8.25E+01	0.48	2.27E+00	5.50E+01	0.00E+00	5.73E+01	4.64E-01	1.12E+01	0.00E+00	1.17E+01	6.89E+01
Paper and Other Webs (Surface Coating)	8.02E+01	0.46	5.54E+01	0.00E+00	0.00E+00	5.54E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.54E+01
Coke By-Product Plants	7.78E+01	0.45	5.83E+01	0.00E+00	0.00E+00	5.83E+01	1.11E+01	0.00E+00	0.00E+00	1.11E+01	6.94E+01
Stationary Internal Combustion Engines	7.65E+01	0.44	3.08E+01	2.05E+01	0.00E+00	5.13E+01	6.88E+00	4.59E+00	0.00E+00	1.15E+01	6.27E+01
Mobile Sources: On- Road Vehicles	7.59E+01	0.44	0.00E+00	0.00E+00	3.76E+01	3.76E+01	0.00E+00	0.00E+00	1.29E+01	1.29E+01	5.05E+01
Secondary Lead Smelting	6.99E+01	0.40	4.84E+01	4.21E+00	0.00E+00	5.26E+01	9.88E-01	8.59E-02	0.00E+00	1.07E+00	5.37E+01
Chemical Manufacturing: Naphthalene	6.46E+01	0.37	1.51E+01	6.46E+00	0.00E+00	2.15E+01	3.01E+01	1.29E+01	0.00E+00	4.31E+01	6.46E+01
Residential Heating: Wood/Wood Residue Combustion	5.92E+01	0.34	0.00E+00	4.08E+01	0.00E+00	4.08E+01	0.00E+00	8.88E+00	0.00E+00	8.88E+00	4.97E+01
Metal Doors, Sash, and Trim	4.91E+01	0.28	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.91E+01	0.00E+00	0.00E+00	4.91E+01	4.91E+01
Asphalt Concrete Manufacturing	4.37E+01	0.25	0.00E+00	4.37E+01	0.00E+00	4.37E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.37E+01
Asphalt Roofing Manufacturing	4.36E+01	0.25	2.74E+01	4.97E+00	0.00E+00	3.24E+01	6.16E+00	1.12E+00	0.00E+00	7.28E+00	3.97E+01
Fabricated Plate Work (Boiler Shops)	4.30E+01	0.25	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	3.68E+01	0.21	1.72E+01	1.84E+01	0.00E+00	3.56E+01	0.00E+00	5.03E-01	0.00E+00	5.03E-01	3.61E+01
Fabricated Structural Metal Manufacturing	3.14E+01	0.18	3.14E+01	0.00E+00	0.00E+00	3.14E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.14E+01

Table 6 - 35 Base Year 1990 National Emission Estimates for Polycyclic Organic Matter as 16-PAH

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Paints and Allied Products Manufacturing	3.07E+01	0.18	2.40E+01	3.74E+00	0.00E+00	2.77E+01	2.90E+00	0.00E+00	0.00E+00	2.90E+00	3.06E+01
Printing/Publishing (Surface Coating)	2.89E+01	0.17	2.89E+01	0.00E+00	0.00E+00	2.89E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.89E+01
Mobile Sources: Non-Road Vehicles and Equipment - Other	2.77E+01	0.16	0.00E+00	0.00E+00	1.92E+01	1.92E+01	0.00E+00	0.00E+00	3.92E+00	3.92E+00	2.31E+01
Plastic Parts and Products (Surface Coating)	2.71E+01	0.16	8.52E+00	5.18E-02	0.00E+00	8.57E+00	1.85E+01	0.00E+00	0.00E+00	1.85E+01	2.71E+01
Phthalic Anhydride Production	2.62E+01	0.15	1.83E+01	7.86E+00	0.00E+00	2.62E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E+01
Blast Furnaces and Steel Mills	2.58E+01	0.15	2.58E+01	0.00E+00	0.00E+00	2.58E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E+01
Large Appliance (Surface Coating)	2.48E+01	0.14	2.15E-02	0.00E+00	0.00E+00	2.15E-02	0.00E+00	4.38E+00	0.00E+00	4.38E+00	4.41E+00
Iron Foundries	2.39E+01	0.14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E+01	1.05E-02	0.00E+00	1.44E+01	1.44E+01
Metal Furniture (Surface Coating)	2.24E+01	0.13	1.81E+01	0.00E+00	0.00E+00	1.81E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E+01
Aluminum Extruded Products	2.08E+01	0.12	1.24E+01	8.36E+00	0.00E+00	2.08E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01
Fabricated Metal Products, nec	1.74E+01	0.10	1.74E+01	0.00E+00	0.00E+00	1.74E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E+01
Industrial Inorganic Chemical Manufacturing	1.57E+01	0.09	1.06E+01	2.84E+00	0.00E+00	1.35E+01	0.00E+00	5.00E-01	0.00E+00	5.00E-01	1.40E+01
Shipbuilding and Ship Repair (Surface Coating)	1.44E+01	0.08	1.08E+01	2.20E-01	0.00E+00	1.10E+01	2.09E+00	4.27E-02	0.00E+00	2.13E+00	1.31E+01
Integrated Iron and Steel Manufacturing	1.36E+01	0.08	1.23E+01	0.00E+00	0.00E+00	1.23E+01	1.34E+00	0.00E+00	0.00E+00	1.34E+00	1.36E+01
Stainless and Non-stainless Steel Manufacture - EAF	1.35E+01	0.08	9.05E+00	7.78E-01	0.00E+00	9.83E+00	2.52E+00	3.00E-01	0.00E+00	2.82E+00	1.26E+01
Motor Vehicle Equipment	1.25E+01	0.07	1.25E+01	0.00E+00	0.00E+00	1.25E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E+01
Municipal Waste Combustors	1.25E+01	0.07	7.97E+00	4.20E-01	0.00E+00	8.39E+00	2.24E+00	1.18E-01	0.00E+00	2.35E+00	1.07E+01

Table 6 - 35 Base Year 1990 National Emission Estimates for Polycyclic Organic Matter as 16-PAH

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Wood Furniture (Surface Coating)	1.13E+01	0.07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-02	0.00E+00	1.15E-02	1.15E-02
Commercial Printing, Letterpress, and Screen	1.04E+01	0.06	1.04E+01	0.00E+00	0.00E+00	1.04E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E+01
Institutional/Commercial Heating	9.83E+00	0.06	0.00E+00	7.65E+00	0.00E+00	7.65E+00	0.00E+00	1.34E+00	0.00E+00	1.34E+00	8.99E+00
Industrial Gases Manufacturing	9.43E+00	0.05	9.43E+00	0.00E+00	0.00E+00	9.43E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.43E+00
Printing, Coating, and Dyeing of Fabrics	8.78E+00	0.05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.78E+00	0.00E+00	0.00E+00	8.78E+00	8.78E+00
Polymers & Resins (I, II, and IV)	8.17E+00	0.05	2.39E+00	9.62E-01	0.00E+00	3.36E+00	4.19E+00	3.75E-01	0.00E+00	4.56E+00	7.92E+00
Utility Boilers - Coal	7.55E+00	0.04	2.91E+00	0.00E+00	0.00E+00	2.91E+00	1.91E+00	0.00E+00	0.00E+00	1.91E+00	4.82E+00
Surface Active Agents Manufacturing	7.41E+00	0.04	0.00E+00	4.59E+00	0.00E+00	4.59E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.59E+00
Tire Production	7.00E+00	0.04	2.37E+00	2.40E-02	0.00E+00	2.40E+00	2.81E+00	2.84E-02	0.00E+00	2.84E+00	5.24E+00
Chemical Preparations	6.79E+00	0.04	8.25E-01	4.26E+00	0.00E+00	5.09E+00	0.00E+00	8.59E-01	0.00E+00	8.59E-01	5.95E+00
Paper Mills (not subject to Pulp and Paper MACT)	6.64E+00	0.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.64E+00	0.00E+00	0.00E+00	6.64E+00	6.64E+00
Chemical Manufacturing: Naphthalene Sulfonates	6.53E+00	0.04	1.83E+00	7.84E-01	0.00E+00	2.61E+00	9.14E-01	3.92E-01	0.00E+00	1.31E+00	3.92E+00
Miscellaneous Plastics Products	5.76E+00	0.03	1.27E-01	0.00E+00	0.00E+00	1.27E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-01
Fiber Cans, Drums, and Similar Products	5.06E+00	0.03	0.00E+00	5.06E+00	0.00E+00	5.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.06E+00
Mobile Sources: Non-Road Vehicles and Equipment - Aircraft	4.69E+00	0.03	0.00E+00	0.00E+00	4.05E+00	4.05E+00	0.00E+00	0.00E+00	4.95E-01	4.95E-01	4.54E+00
Primary Nonferrous Metals Production	4.55E+00	0.03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.55E+00	0.00E+00	0.00E+00	4.55E+00	4.55E+00
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	4.52E+00	0.03	6.90E-01	0.00E+00	0.00E+00	6.90E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.90E-01

Table 6 - 35 Base Year 1990 National Emission Estimates for Polycyclic Organic Matter as 16-PAH

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Carbon Black Production	4.33E+00	0.03	2.62E-01	6.10E-01	0.00E+00	8.72E-01	7.50E-01	1.75E+00	0.00E+00	2.50E+00	3.37E+00
Adhesives and Sealants	4.18E+00	0.02	0.00E+00	4.18E+00	0.00E+00	4.18E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.18E+00
Carbamate Insecticides Production	4.08E+00	0.02	1.22E+00	2.86E+00	0.00E+00	4.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.08E+00
Transformers, Except Electronic	3.70E+00	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E+00	0.00E+00	0.00E+00	3.70E+00	3.70E+00
Needles, Pins, Hooks and Eyes and Similar Notions	3.60E+00	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Residential Heating: Distillate Oil Combustion	3.55E+00	0.02	0.00E+00	2.46E+00	0.00E+00	2.46E+00	0.00E+00	5.03E-01	0.00E+00	5.03E-01	2.97E+00
Meat Packing Plants	3.53E+00	0.02	3.53E+00	0.00E+00	0.00E+00	3.53E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.53E+00
Cigarette Smoke	3.45E+00	0.02	0.00E+00	2.39E+00	0.00E+00	2.39E+00	0.00E+00	4.89E-01	0.00E+00	4.89E-01	2.88E+00
Metal Coil (Surface Coating)	2.86E+00	0.02	1.27E+00	9.56E-02	0.00E+00	1.37E+00	7.63E-01	5.74E-02	0.00E+00	8.20E-01	2.19E+00
Cold Finishing of Steel Shapes	2.55E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon and Graphite Products	2.08E+00	0.01	0.00E+00	8.00E-02	0.00E+00	8.00E-02	0.00E+00	1.02E-01	0.00E+00	1.02E-01	1.81E-01
Agricultural Chemicals and Pesticides	1.88E+00	0.01	3.55E-02	1.27E-01	0.00E+00	1.63E-01	1.71E+00	0.00E+00	0.00E+00	1.71E+00	1.87E+00
Internal Combustion Engine Manufacturing	1.71E+00	0.01	1.71E+00	0.00E+00	0.00E+00	1.71E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E+00
Sewage Sludge Incineration	1.64E+00	0.01	0.00E+00	1.35E+00	0.00E+00	1.35E+00	0.00E+00	2.16E-01	0.00E+00	2.16E-01	1.57E+00
Residential Heating: Natural Gas Combustion	1.38E+00	0.01	0.00E+00	9.57E-01	0.00E+00	9.57E-01	0.00E+00	1.95E-01	0.00E+00	1.95E-01	1.15E+00
Naphthalene: Miscellaneous Uses	1.25E+00	0.01	2.33E-01	5.42E-01	0.00E+00	7.75E-01	1.09E-01	2.54E-01	0.00E+00	3.62E-01	1.14E+00
Stationary Combustion Turbines	1.15E+00	0.01	3.85E-01	3.85E-01	0.00E+00	7.70E-01	8.62E-02	8.62E-02	0.00E+00	1.72E-01	9.43E-01

Table 6 - 35 Base Year 1990 National Emission Estimates for Polycyclic Organic Matter as 16-PAH

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Mobile Sources: Non-Road Vehicles and Equipment - Commercial Marine Vessels	9.30E-01	0.01	0.00E+00	0.00E+00	9.30E-01	9.30E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.30E-01
Fabric Dress and Work Gloves	9.00E-01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nonferrous Wire Drawing and Insulating	8.45E-01	< 0.01	3.00E-01	0.00E+00	0.00E+00	3.00E-01	5.45E-01	0.00E+00	0.00E+00	5.45E-01	8.45E-01
Medical Waste Incinerators	8.00E-01	< 0.01	5.58E-02	3.16E-01	0.00E+00	3.72E-01	2.74E-02	1.55E-01	0.00E+00	1.83E-01	5.55E-01
Pharmaceuticals Production	7.66E-01	< 0.01	5.00E-03	1.10E-02	0.00E+00	1.60E-02	7.50E-01	0.00E+00	0.00E+00	7.50E-01	7.66E-01
Polishes and Sanitation Goods Manufacturing	7.52E-01	< 0.01	1.25E-01	6.27E-01	0.00E+00	7.52E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.52E-01
Aluminum Foundries	7.50E-01	< 0.01	0.00E+00	7.50E-01	0.00E+00	7.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E-01
Utility Boilers - Natural Gas	6.90E-01	< 0.01	0.00E+00	3.91E-01	0.00E+00	3.91E-01	0.00E+00	1.89E-01	0.00E+00	1.89E-01	5.79E-01
Construction Machinery Manufacturing	6.58E-01	< 0.01	5.00E-01	0.00E+00	0.00E+00	5.00E-01	1.58E-01	0.00E+00	0.00E+00	1.58E-01	6.57E-01
Soap and Other Detergents Manufacturing	6.25E-01	< 0.01	0.00E+00	6.25E-01	0.00E+00	6.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.25E-01
Petroleum Bulk Stations and Terminals (not subject to Petroleum Refining MACT)	5.75E-01	< 0.01	4.50E-01	1.25E-01	0.00E+00	5.75E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.75E-01
Utility Boilers - Oil	5.70E-01	< 0.01	3.29E-01	1.41E-01	0.00E+00	4.69E-01	5.48E-02	2.35E-02	0.00E+00	7.82E-02	5.48E-01
Clay Products Manufacturing	5.60E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Electrometallurgical Products Manufacturing	5.60E-01	< 0.01	1.93E-01	3.14E-02	0.00E+00	2.24E-01	7.71E-02	1.25E-02	0.00E+00	8.96E-02	3.14E-01
Aluminum Sheet, Plate, and Foil manufacturing	5.50E-01	< 0.01	5.50E-01	0.00E+00	0.00E+00	5.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.50E-01
Clay Refractories (not subject to Refractories Manufacturing MACT)	5.00E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gum and Wood Chemical Manufacturing	5.00E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 6 - 35 Base Year 1990 National Emission Estimates for Polycyclic Organic Matter as 16-PAH

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Miscellaneous Chemical Products (2890)	5.00E-01	< 0.01	0.00E+00	5.00E-01	0.00E+00	5.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-01
Municipal Landfills	4.45E-01	< 0.01	3.06E-02	2.78E-01	0.00E+00	3.09E-01	6.24E-03	5.68E-02	0.00E+00	6.30E-02	3.72E-01
Oil and Gas Field Machinery Manufacturing	3.75E-01	< 0.01	3.75E-01	0.00E+00	0.00E+00	3.75E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-01
Cement, Hydraulic (not subject to Portland Cement MACT)	2.54E-01	< 0.01	0.00E+00	4.50E-03	0.00E+00	4.50E-03	0.00E+00	4.90E-02	0.00E+00	4.90E-02	5.35E-02
Sheet Metal Work	2.22E-01	< 0.01	0.00E+00	2.22E-01	0.00E+00	2.22E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-01
Hydrochloric Acid Production	1.58E-01	< 0.01	8.70E-02	1.32E-03	0.00E+00	8.83E-02	5.21E-03	7.93E-05	0.00E+00	5.29E-03	9.36E-02
Manufacturing Industries, nec	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Metal Barrels, Drums, and Pails Manufacturing	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Lubricating Oils and Greases	6.00E-02	< 0.01	0.00E+00	5.00E-02	0.00E+00	5.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-02
Animal Cremation	3.85E-02	< 0.01	0.00E+00	2.23E-02	0.00E+00	2.23E-02	0.00E+00	6.16E-03	0.00E+00	6.16E-03	2.85E-02
Residential Heating: Bituminous and Lignite Coal Combustion	1.83E-02	< 0.01	0.00E+00	1.27E-02	0.00E+00	1.27E-02	0.00E+00	2.59E-03	0.00E+00	2.59E-03	1.53E-02
Human Cremation	1.32E-02	< 0.01	0.00E+00	9.16E-03	0.00E+00	9.16E-03	0.00E+00	1.87E-03	0.00E+00	1.87E-03	1.10E-02
Residential Heating: Anthracite Coal Combustion	6.95E-03	< 0.01	0.00E+00	4.82E-03	0.00E+00	4.82E-03	0.00E+00	9.84E-04	0.00E+00	9.84E-04	5.81E-03
Scrap Tire Combustion	5.18E-03	< 0.01	1.96E-03	0.00E+00	0.00E+00	1.96E-03	1.93E-03	0.00E+00	0.00E+00	1.93E-03	3.89E-03
Potato Chips and Similar Snacks	5.00E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	2.50E-03	5.00E-03
Commercial Physical Research	4.00E-03	< 0.01	0.00E+00	4.00E-03	0.00E+00	4.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-03
Nonmetallic Mineral Products Manufacturing	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03

**Table 6 - 35 Base Year 1990 National Emission Estimates for
Polycyclic Organic Matter as 16-PAH**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Utility Boilers - Coke	8.82E-04	< 0.01	6.61E-04	0.00E+00	0.00E+00	6.61E-04	1.26E-04	0.00E+00	0.00E+00	1.26E-04	7.87E-04
Drum and Barrel Reclamation	8.19E-05	< 0.01	0.00E+00	8.19E-05	0.00E+00	8.19E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.19E-05

**Table 6 - 36 Base Year 1990 National Emission Estimates for
Quinoline**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	
MON	1.22E+01	47.07	8.88E+00	8.97E-02	0.00E+00	8.97E+00	1.44E+00	1.46E-02	0.00E+00	1.46E+00	1.04E+01
Coke By-Product Plants	8.93E+00	34.31	6.70E+00	0.00E+00	0.00E+00	6.70E+00	1.28E+00	0.00E+00	0.00E+00	1.28E+00	7.97E+00
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	4.38E+00	16.83	2.77E+00	1.11E+00	0.00E+00	3.88E+00	2.50E-01	2.50E-01	0.00E+00	5.00E-01	4.38E+00
Pharmaceuticals Production	2.50E-01	0.96	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	2.50E-01	2.50E-01
Integrated Iron and Steel Manufacturing	8.60E-02	0.33	7.75E-02	0.00E+00	0.00E+00	7.75E-02	8.49E-03	0.00E+00	0.00E+00	8.49E-03	8.60E-02
Wood Preserving	8.50E-02	0.33	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Blast Furnaces and Steel Mills	4.55E-02	0.17	4.55E-02	0.00E+00	0.00E+00	4.55E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.55E-02

Table 6 - 37 Base Year 1990 National Emission Estimates for Styrene

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Mobile Sources: On-Road Vehicles	1.79E+04	32.87	0.00E+00	0.00E+00	8.86E+03	8.86E+03	0.00E+00	0.00E+00	3.04E+03	3.04E+03	1.19E+04
Reinforced Plastic Composites Production	1.51E+04	27.68	5.89E+03	8.67E+02	0.00E+00	6.76E+03	3.45E+03	5.10E+02	0.00E+00	3.96E+03	1.07E+04
Boat Manufacturing	6.60E+03	12.11	2.74E+03	2.95E+02	0.00E+00	3.04E+03	1.46E+03	1.57E+02	0.00E+00	1.62E+03	4.66E+03
Polystyrene Production	3.81E+03	6.99	2.70E+03	0.00E+00	0.00E+00	2.70E+03	2.81E+02	0.00E+00	0.00E+00	2.81E+02	2.98E+03
Mobile Sources: Non-Road Vehicles and Equipment - Other	1.91E+03	3.50	0.00E+00	0.00E+00	1.32E+03	1.32E+03	0.00E+00	0.00E+00	2.70E+02	2.70E+02	1.59E+03
MON	1.60E+03	2.94	1.16E+03	1.17E+01	0.00E+00	1.17E+03	1.88E+02	1.90E+00	0.00E+00	1.90E+02	1.36E+03
Petroleum Refineries: Other Sources Not Distinctly Listed	1.54E+03	2.83	9.22E+02	1.88E+01	0.00E+00	9.41E+02	3.96E+02	8.09E+00	0.00E+00	4.05E+02	1.35E+03
Polymers & Resins (I, II, and IV)	1.35E+03	2.47	9.70E+02	8.82E+01	0.00E+00	1.06E+03	1.85E+02	1.37E+01	0.00E+00	1.98E+02	1.26E+03
Chemical Manufacturing: Styrene-Butadiene Copolymer Latexes	7.28E+02	1.34	5.76E+02	0.00E+00	0.00E+00	5.76E+02	4.96E+01	0.00E+00	0.00E+00	4.96E+01	6.25E+02
Chemical Manufacturing: Styrene (Storage Emissions)	6.62E+02	1.22	4.77E+02	0.00E+00	0.00E+00	4.77E+02	2.45E+01	0.00E+00	0.00E+00	2.45E+01	5.01E+02
Pulp and Paper Production (non-combustion) MACT I	5.35E+02	0.98	1.00E+02	0.00E+00	0.00E+00	1.00E+02	1.83E+02	0.00E+00	0.00E+00	1.83E+02	2.83E+02
Chemical Manufacturing: ABS Resins	3.73E+02	0.68	1.44E+02	0.00E+00	0.00E+00	1.44E+02	2.29E+02	0.00E+00	0.00E+00	2.29E+02	3.73E+02
Chemical Manufacturing: Styrene	2.37E+02	0.44	1.71E+02	0.00E+00	0.00E+00	1.71E+02	8.76E+00	0.00E+00	0.00E+00	8.76E+00	1.80E+02
Mobile Sources: Non-Road Vehicles and Equipment - Aircraft	1.90E+02	0.35	0.00E+00	0.00E+00	1.64E+02	1.64E+02	0.00E+00	0.00E+00	2.00E+01	2.00E+01	1.84E+02
Publicly Owned Treatment Works (POTW) Emissions	1.75E+02	0.32	4.82E+00	1.17E+02	0.00E+00	1.21E+02	9.84E-01	2.38E+01	0.00E+00	2.48E+01	1.46E+02
Pressed and Blown Glass and Glassware Manufacturing	1.60E+02	0.29	0.00E+00	5.86E+00	0.00E+00	5.86E+00	1.50E+02	0.00E+00	0.00E+00	1.50E+02	1.56E+02
Unsupported Plastics Film & Sheet	1.56E+02	0.29	1.56E+02	0.00E+00	0.00E+00	1.56E+02	0.00E+00	6.55E-01	0.00E+00	6.55E-01	1.56E+02

Table 6 - 37 Base Year 1990 National Emission Estimates for Styrene

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Printing, Coating, and Dyeing of Fabrics	1.24E+02	0.23	0.00E+00	1.40E+00	0.00E+00	1.40E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E+00
Clay Products Manufacturing	1.22E+02	0.22	1.21E+02	3.75E-01	0.00E+00	1.21E+02	1.25E-01	0.00E+00	0.00E+00	1.25E-01	1.21E+02
Industrial Organic Chemicals Manufacturing	1.21E+02	0.22	1.03E+02	8.40E+00	0.00E+00	1.11E+02	2.13E+00	9.41E-01	0.00E+00	3.07E+00	1.14E+02
Pulp and Paper Production (combustion) MACT II	1.17E+02	0.21	2.16E+01	0.00E+00	0.00E+00	2.16E+01	4.01E+01	0.00E+00	0.00E+00	4.01E+01	6.17E+01
Paints and Allied Products Manufacturing	1.08E+02	0.20	5.15E+01	4.22E+01	0.00E+00	9.37E+01	9.56E-01	1.18E+01	0.00E+00	1.28E+01	1.06E+02
Secondary Lead Smelting	9.59E+01	0.18	6.64E+01	5.78E+00	0.00E+00	7.22E+01	1.36E+00	1.18E-01	0.00E+00	1.47E+00	7.37E+01
Mobile Sources: Non-Road Vehicles and Equipment - Locomotives	6.91E+01	0.13	0.00E+00	0.00E+00	4.80E+01	4.80E+01	0.00E+00	0.00E+00	9.79E+00	9.79E+00	5.78E+01
Mobile Sources: Non-Road Vehicles and Equipment - Commercial Marine Vessels	6.09E+01	0.11	0.00E+00	0.00E+00	6.09E+01	6.09E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.09E+01
Ship and Boat Building (not subject to Boats Manufacturing MACT)	5.49E+01	0.10	2.71E+01	3.50E+00	0.00E+00	3.06E+01	1.98E+01	4.47E+00	0.00E+00	2.43E+01	5.49E+01
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	4.98E+01	0.09	4.42E+01	5.55E+00	0.00E+00	4.97E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.97E+01
Open Burning: Scrap Tires	4.76E+01	0.09	0.00E+00	3.24E+01	0.00E+00	3.24E+01	0.00E+00	7.61E+00	0.00E+00	7.61E+00	4.00E+01
Wood Furniture (Surface Coating)	3.72E+01	0.07	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Concrete Products	2.92E+01	0.05	2.15E+01	7.40E+00	0.00E+00	2.88E+01	0.00E+00	3.75E-01	0.00E+00	3.75E-01	2.92E+01
Surface Active Agents Manufacturing	2.85E+01	0.05	2.84E+01	1.25E-01	0.00E+00	2.85E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.85E+01
Utility Boilers - Coal	2.70E+01	0.05	1.04E+01	0.00E+00	0.00E+00	1.04E+01	6.81E+00	0.00E+00	0.00E+00	6.81E+00	1.72E+01
Household Audio and Video Equipment	2.41E+01	0.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E+01	0.00E+00	0.00E+00	2.41E+01	2.41E+01
Nonferrous Foundries, nec	2.26E+01	0.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E+01	0.00E+00	0.00E+00	2.26E+01	2.26E+01

Table 6 - 37 Base Year 1990 National Emission Estimates for Styrene

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Fasteners, Buttons, Needles, and Pins	1.95E+01	0.04	0.00E+00	3.75E-01	0.00E+00	3.75E-01	1.40E+01	0.00E+00	0.00E+00	1.40E+01	1.44E+01
Tanks and Tank Components Manufacturing	1.86E+01	0.03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E+01	0.00E+00	0.00E+00	1.86E+01	1.86E+01
Tire Production	1.76E+01	0.03	5.98E+00	6.04E-02	0.00E+00	6.04E+00	7.07E+00	7.14E-02	0.00E+00	7.14E+00	1.32E+01
Petroleum Refining (not subject to Petroleum Refining MACT)	1.72E+01	0.03	1.68E+01	0.00E+00	0.00E+00	1.68E+01	0.00E+00	4.20E-01	0.00E+00	4.20E-01	1.72E+01
Iron Foundries	1.72E+01	0.03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Metal Doors, Sash, and Trim	1.67E+01	0.03	0.00E+00	1.64E+01	0.00E+00	1.64E+01	0.00E+00	2.58E-01	0.00E+00	2.58E-01	1.67E+01
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	1.59E+01	0.03	0.00E+00	7.90E+00	0.00E+00	7.90E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.90E+00
Farm Machinery and Equipment Manufacturing	1.26E+01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E+00	0.00E+00	7.43E+00	7.43E+00
Wood Products	1.21E+01	0.02	0.00E+00	2.07E+00	0.00E+00	2.07E+00	1.01E+01	0.00E+00	0.00E+00	1.01E+01	1.21E+01
Printing/Publishing (Surface Coating)	1.12E+01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Industrial Inorganic Chemical Manufacturing	1.11E+01	0.02	4.56E+00	6.30E+00	0.00E+00	1.09E+01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	1.11E+01
Paper Coating and Glazing Manufacturing	9.50E+00	0.02	0.00E+00	9.50E+00	0.00E+00	9.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.50E+00
Fabricated Structural Metal Manufacturing	8.85E+00	0.02	0.00E+00	8.10E+00	0.00E+00	8.10E+00	0.00E+00	7.50E-01	0.00E+00	7.50E-01	8.85E+00
Custom Compound Purchased Resins Manufacturing	8.82E+00	0.02	0.00E+00	8.82E+00	0.00E+00	8.82E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.82E+00
Fabricated Plate Work (Boiler Shops)	8.23E+00	0.02	0.00E+00	5.71E+00	0.00E+00	5.71E+00	0.00E+00	1.95E+00	0.00E+00	1.95E+00	7.66E+00
Adhesives and Sealants	8.13E+00	0.01	0.00E+00	3.86E+00	0.00E+00	3.86E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.86E+00
Miscellaneous Transportation Equipment	8.07E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 6 - 37 Base Year 1990 National Emission Estimates for Styrene

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Miscellaneous Plastics Products	8.06E+00	0.01	0.00E+00	7.32E+00	0.00E+00	7.32E+00	2.50E-01	0.00E+00	0.00E+00	2.50E-01	7.57E+00
Prefabricated Metal Buildings	7.95E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.95E+00	0.00E+00	7.95E+00	7.95E+00
Blast Furnaces and Steel Mills	6.71E+00	0.01	6.71E+00	0.00E+00	0.00E+00	6.71E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.71E+00
Fabricated Rubber Products, nec	6.69E+00	0.01	5.00E+00	0.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E+00
Large Appliance (Surface Coating)	5.99E+00	0.01	1.28E-01	2.80E+00	0.00E+00	2.93E+00	0.00E+00	3.06E+00	0.00E+00	3.06E+00	5.99E+00
Motor and Generators Manufacturing	5.40E+00	0.01	5.40E+00	0.00E+00	0.00E+00	5.40E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.40E+00
Miscellaneous Plastics Products, nec	5.05E+00	0.01	0.00E+00	5.05E+00	0.00E+00	5.05E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.05E+00
Chemical Preparations	4.60E+00	0.01	2.46E+00	2.14E+00	0.00E+00	4.60E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.60E+00
Lawn and Garden Equipment	4.50E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Industrial Machinery, nec	4.45E+00	0.01	0.00E+00	1.81E+00	0.00E+00	1.81E+00	0.00E+00	2.64E+00	0.00E+00	2.64E+00	4.45E+00
Paper and Other Webs (Surface Coating)	4.08E+00	0.01	4.08E+00	0.00E+00	0.00E+00	4.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.08E+00
Paper Mills (not subject to Pulp and Paper MACT)	4.08E+00	0.01	0.00E+00	4.08E+00	0.00E+00	4.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.08E+00
Buttons	3.83E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.83E+00	0.00E+00	3.83E+00	3.83E+00
Noncurrent-Carrying Wiring Devices	3.35E+00	0.01	0.00E+00	3.35E+00	0.00E+00	3.35E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.35E+00
Manufacturing Industries, nec	3.30E+00	0.01	1.85E+00	1.45E+00	0.00E+00	3.30E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E+00
Coke By-Product Plants	3.21E+00	0.01	2.41E+00	0.00E+00	0.00E+00	2.41E+00	4.59E-01	0.00E+00	0.00E+00	4.59E-01	2.87E+00
Nonferrous Forgings	3.00E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 6 - 37 Base Year 1990 National Emission Estimates for Styrene

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Household Appliances	2.92E+00	0.01	0.00E+00	2.92E+00	0.00E+00	2.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.92E+00
Rubber & Misc. Plastic Products	2.73E+00	0.01	0.00E+00	2.73E+00	0.00E+00	2.73E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.73E+00
Paperboard Mills	2.70E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Photographic Equipment And Supplies	2.15E+00	< 0.01	2.02E+00	1.28E-01	0.00E+00	2.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.15E+00
Cut Stone and Stone Products	1.90E+00	< 0.01	0.00E+00	1.90E+00	0.00E+00	1.90E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+00
Switchgear and Switchboard Apparatus	1.60E+00	< 0.01	0.00E+00	1.60E+00	0.00E+00	1.60E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E+00
Transportation Equipment	1.50E+00	< 0.01	0.00E+00	1.50E+00	0.00E+00	1.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E+00
Products of Purchased Glass	1.45E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Turbines and Turbine Generator Sets	1.38E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Miscellaneous Fabricated Wire Products	1.34E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Transformers, Except Electronic	1.23E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E+00	0.00E+00	0.00E+00	1.23E+00	1.23E+00
Tire Cord And Fabrics	1.03E+00	< 0.01	0.00E+00	1.02E-01	0.00E+00	1.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-01
Nonferrous Wire Drawing and Insulating	1.03E+00	< 0.01	9.97E-01	2.95E-02	0.00E+00	1.03E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E+00
Soap and Other Detergents Manufacturing	1.02E+00	< 0.01	0.00E+00	1.02E+00	0.00E+00	1.02E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E+00
Gum and Wood Chemical Manufacturing	9.84E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.84E-01	0.00E+00	0.00E+00	9.84E-01	9.84E-01
Plywood/Particle Board Manufacturing	8.65E-01	< 0.01	6.74E-02	1.73E-03	0.00E+00	6.91E-02	2.71E-01	6.94E-03	0.00E+00	2.78E-01	3.47E-01
Cement, Hydraulic (not subject to Portland Cement MACT)	5.68E-01	< 0.01	0.00E+00	1.21E-01	0.00E+00	1.21E-01	0.00E+00	1.88E-01	0.00E+00	1.88E-01	3.08E-01

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112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Integrated Iron and Steel Manufacturing	5.60E-01	< 0.01	5.04E-01	0.00E+00	0.00E+00	5.04E-01	5.52E-02	0.00E+00	0.00E+00	5.52E-02	5.60E-01
Elevators and Moving Stairways Manufacturing	5.00E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-01	0.00E+00	5.00E-01	5.00E-01
Silverware and Plated Ware	5.00E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-01	0.00E+00	5.00E-01	5.00E-01
Industrial Boilers	4.79E-01	< 0.01	2.89E-01	3.21E-02	0.00E+00	3.21E-01	6.46E-02	7.18E-03	0.00E+00	7.18E-02	3.92E-01
Polishes and Sanitation Goods Manufacturing	4.50E-01	< 0.01	0.00E+00	2.55E-01	0.00E+00	2.55E-01	1.95E-01	0.00E+00	0.00E+00	1.95E-01	4.50E-01
Primary Copper (not subject to Primary Copper Smelting MACT)	3.75E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-01	0.00E+00	3.75E-01	3.75E-01
General building contractors	2.74E-01	< 0.01	0.00E+00	2.74E-01	0.00E+00	2.74E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.74E-01
Water, Sewer, and Utility Lines	2.51E-01	< 0.01	0.00E+00	1.26E-01	0.00E+00	1.26E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-01
Commercial Lighting Fixtures	2.50E-01	< 0.01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Inorganic Pigments Manufacturing	2.50E-01	< 0.01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Wet Corn Milling	2.50E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01	0.00E+00	2.50E-01	2.50E-01
Motor Vehicle Equipment	2.30E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-01	0.00E+00	2.30E-01	2.30E-01
Cathode Ray Television Picture Tubes Manufacturing	1.80E-01	< 0.01	0.00E+00	1.80E-01	0.00E+00	1.80E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01
Aluminum Die-Castings	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Chemicals and Allied Products, nec	1.25E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.25E-01
Concrete Block and Brick	1.25E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.25E-01
Special Trade Contractors, nec	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01

Table 6 - 37 Base Year 1990 National Emission Estimates for Styrene

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Wood Building Products (Surface Coating)	1.25E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Wood Preserving	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Asphalt Concrete Manufacturing	8.70E-02	< 0.01	0.00E+00	8.70E-02	0.00E+00	8.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.70E-02
Institutional/Commercial Heating	5.10E-02	< 0.01	0.00E+00	3.97E-02	0.00E+00	3.97E-02	0.00E+00	6.62E-03	0.00E+00	6.62E-03	4.64E-02
Residential Heating: Bituminous and Lignite Coal Combustion	2.41E-02	< 0.01	0.00E+00	1.67E-02	0.00E+00	1.67E-02	0.00E+00	3.41E-03	0.00E+00	3.41E-03	2.01E-02
Mineral Wool Manufacturing (not subject to Mineral Wool Production MACT)	1.20E-02	< 0.01	1.20E-02	0.00E+00	0.00E+00	1.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-02
Utility Boilers - Coke	1.16E-02	< 0.01	8.70E-03	0.00E+00	0.00E+00	8.70E-03	1.66E-03	0.00E+00	0.00E+00	1.66E-03	1.04E-02
Residential Heating: Anthracite Coal Combustion	9.15E-03	< 0.01	0.00E+00	6.35E-03	0.00E+00	6.35E-03	0.00E+00	1.30E-03	0.00E+00	1.30E-03	7.64E-03
Chemicals and Allied Products Manufacturing	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Commercial Physical Research	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Burial Caskets	2.50E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	0.00E+00	2.50E-03	2.50E-03
Creamery Butter	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Industrial Patterns	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03

**Table 6 - 38 Base Year 1990 National Emission Estimates for
Tetrachloroethylene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Dry Cleaning Facilities	9.57E+04	75.82	0.00E+00	5.93E+04	0.00E+00	5.93E+04	0.00E+00	1.72E+04	0.00E+00	1.72E+04	7.66E+04
Halogenated Solvent Cleaners	1.19E+04	9.41	6.32E+03	2.71E+03	0.00E+00	9.02E+03	1.08E+03	4.63E+02	0.00E+00	1.54E+03	1.06E+04
Aerospace Industries	3.99E+03	3.16	3.69E+03	8.14E+01	0.00E+00	3.77E+03	1.08E+02	1.89E+01	0.00E+00	1.27E+02	3.90E+03
Consumer Products Usage	3.51E+03	2.78	0.00E+00	2.43E+03	0.00E+00	2.43E+03	0.00E+00	4.97E+02	0.00E+00	4.97E+02	2.93E+03
Pulp and Paper Production (non-combustion) MACT I	8.85E+02	0.70	1.69E+02	0.00E+00	0.00E+00	1.69E+02	3.06E+02	0.00E+00	0.00E+00	3.06E+02	4.74E+02
Municipal Landfills	7.17E+02	0.57	4.92E+01	4.48E+02	0.00E+00	4.97E+02	1.00E+01	9.14E+01	0.00E+00	1.01E+02	5.99E+02
Plastic Parts and Products (Surface Coating)	6.71E+02	0.53	5.03E+02	2.71E+01	0.00E+00	5.30E+02	6.02E+01	9.40E+00	0.00E+00	6.96E+01	6.00E+02
Large Appliance (Surface Coating)	4.69E+02	0.37	3.14E+02	9.60E+00	0.00E+00	3.24E+02	1.25E-01	0.00E+00	0.00E+00	1.25E-01	3.24E+02
Aluminum Sheet, Plate, and Foil manufacturing	4.67E+02	0.37	4.67E+02	0.00E+00	0.00E+00	4.67E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.67E+02
Printing, Coating, and Dyeing of Fabrics	4.67E+02	0.37	2.52E+02	6.26E+00	0.00E+00	2.58E+02	9.84E+01	2.50E-01	0.00E+00	9.86E+01	3.57E+02
Power Transmission Equipment	3.73E+02	0.30	3.53E+02	8.50E+00	0.00E+00	3.62E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.62E+02
Plating And Polishing	3.53E+02	0.28	2.87E+02	6.56E+01	0.00E+00	3.53E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.53E+02
Transportation Equipment	3.08E+02	0.24	3.08E+02	0.00E+00	0.00E+00	3.08E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.08E+02
Publicly Owned Treatment Works (POTW) Emissions	2.91E+02	0.23	8.02E+00	1.94E+02	0.00E+00	2.02E+02	1.64E+00	3.96E+01	0.00E+00	4.12E+01	2.43E+02
Paper and Other Webs (Surface Coating)	2.69E+02	0.21	1.02E+01	2.72E+01	0.00E+00	3.73E+01	2.11E+02	0.00E+00	0.00E+00	2.11E+02	2.48E+02
Electronic Components, nec	2.60E+02	0.21	2.36E+02	1.36E+01	0.00E+00	2.50E+02	0.00E+00	2.99E+00	0.00E+00	2.99E+00	2.53E+02
Fabricated Rubber Products, nec	2.36E+02	0.19	1.64E+02	1.18E+01	0.00E+00	1.76E+02	4.17E+01	0.00E+00	0.00E+00	4.17E+01	2.18E+02

**Table 6 - 38 Base Year 1990 National Emission Estimates for
Tetrachloroethylene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Bolts, Nuts, Rivets and Washers Manufacturing	2.26E+02	0.18	2.26E+02	1.25E-01	0.00E+00	2.26E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E+02
Fabricated Metal Products, nec	2.10E+02	0.17	2.03E+02	7.07E+00	0.00E+00	2.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+02
Transformers, Except Electronic	1.99E+02	0.16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E+02	0.00E+00	0.00E+00	1.33E+02	1.33E+02
Industrial Organic Chemicals Manufacturing	1.94E+02	0.15	1.86E+02	2.41E+00	0.00E+00	1.88E+02	4.28E+00	1.27E+00	0.00E+00	5.54E+00	1.94E+02
Metal Stampings Manufacturing	1.92E+02	0.15	9.48E+01	1.59E+01	0.00E+00	1.11E+02	8.18E+01	0.00E+00	0.00E+00	8.18E+01	1.92E+02
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	1.80E+02	0.14	4.62E+01	8.28E-01	0.00E+00	4.70E+01	1.24E+02	0.00E+00	0.00E+00	1.24E+02	1.71E+02
Integrated Iron and Steel Manufacturing	1.50E+02	0.12	1.35E+02	0.00E+00	0.00E+00	1.35E+02	1.48E+01	0.00E+00	0.00E+00	1.48E+01	1.50E+02
Metal Heat Treating Manufacturing	1.30E+02	0.10	1.00E+02	2.99E+01	0.00E+00	1.30E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E+02
Environmental Controls Manufacturing	1.23E+02	0.10	7.54E+01	6.58E+00	0.00E+00	8.20E+01	3.66E+01	4.71E+00	0.00E+00	4.13E+01	1.23E+02
Printing/Publishing (Surface Coating)	9.84E+01	0.08	4.88E+01	2.20E+01	0.00E+00	7.08E+01	2.38E+00	1.66E+01	0.00E+00	1.90E+01	8.98E+01
Telephone and Telegraph Apparatus	9.52E+01	0.08	8.33E+01	0.00E+00	0.00E+00	8.33E+01	8.03E+00	3.95E+00	0.00E+00	1.20E+01	9.52E+01
Nonferrous Foundries, nec	9.40E+01	0.07	8.49E+01	1.25E-01	0.00E+00	8.50E+01	0.00E+00	9.03E+00	0.00E+00	9.03E+00	9.40E+01
Primary Nonferrous Metals Production	9.17E+01	0.07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Metal Can (Surface Coating)	9.15E+01	0.07	5.45E+01	0.00E+00	0.00E+00	5.45E+01	3.65E+01	5.00E-01	0.00E+00	3.70E+01	9.15E+01
Semiconductor Manufacturing	9.07E+01	0.07	7.76E+01	1.07E+01	0.00E+00	8.84E+01	0.00E+00	2.30E+00	0.00E+00	2.30E+00	9.07E+01
Miscellaneous Fabricated Wire Products	8.84E+01	0.07	7.82E+01	9.00E+00	0.00E+00	8.72E+01	0.00E+00	4.00E-01	0.00E+00	4.00E-01	8.76E+01
Special Industry Machinery, nec	8.30E+01	0.07	8.30E+01	0.00E+00	0.00E+00	8.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.30E+01

**Table 6 - 38 Base Year 1990 National Emission Estimates for
Tetrachloroethylene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Air Transportation, Scheduled	7.55E+01	0.06	7.55E+01	0.00E+00	0.00E+00	7.55E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.55E+01
Instruments to Measure Electricity	7.06E+01	0.06	6.00E+01	0.00E+00	0.00E+00	6.00E+01	1.06E+01	0.00E+00	0.00E+00	1.06E+01	7.06E+01
Copper Rolling and Drawing	6.87E+01	0.05	0.00E+00	9.43E+00	0.00E+00	9.43E+00	2.53E+01	0.00E+00	0.00E+00	2.53E+01	3.47E+01
MON	6.75E+01	0.05	4.90E+01	4.95E-01	0.00E+00	4.95E+01	7.94E+00	8.02E-02	0.00E+00	8.02E+00	5.75E+01
Carburetors, Pistons, Rings and Valves Manufacturing	6.69E+01	0.05	3.40E+01	0.00E+00	0.00E+00	3.40E+01	3.29E+01	0.00E+00	0.00E+00	3.29E+01	6.69E+01
Aluminum Extruded Products	6.65E+01	0.05	1.30E+01	0.00E+00	0.00E+00	1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E+01
Aluminum Foundries (Castings)	6.57E+01	0.05	5.71E+01	8.63E+00	0.00E+00	6.57E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.57E+01
Wood Building Products (Surface Coating)	6.55E+01	0.05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.55E+01	0.00E+00	0.00E+00	6.55E+01	6.55E+01
Engine Electric Equipment	6.36E+01	0.05	1.54E+01	0.00E+00	0.00E+00	1.54E+01	4.83E+01	0.00E+00	0.00E+00	4.83E+01	6.36E+01
Hardware Manufacturing	6.32E+01	0.05	5.42E+01	0.00E+00	0.00E+00	5.42E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.42E+01
Household Appliances	6.20E+01	0.05	5.50E+01	7.00E+00	0.00E+00	6.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.20E+01
Agricultural Chemicals and Pesticides	6.11E+01	0.05	6.10E+01	0.00E+00	0.00E+00	6.10E+01	0.00E+00	1.50E-01	0.00E+00	1.50E-01	6.11E+01
Aluminum Die-Castings	5.99E+01	0.05	5.09E+01	9.00E+00	0.00E+00	5.99E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.99E+01
Manufacturing Industries, nec	5.96E+01	0.05	1.26E+01	0.00E+00	0.00E+00	1.26E+01	3.81E+01	0.00E+00	0.00E+00	3.81E+01	5.06E+01
Residential lighting fixtures	5.93E+01	0.05	1.09E+01	8.38E+00	0.00E+00	1.93E+01	2.82E+01	0.00E+00	0.00E+00	2.82E+01	4.74E+01
Switchgear and Switchboard Apparatus	5.82E+01	0.05	5.25E+01	5.70E+00	0.00E+00	5.82E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.82E+01
Metal coating and allied services (3479)	5.76E+01	0.05	2.39E+01	1.72E+01	0.00E+00	4.11E+01	0.00E+00	4.19E+00	0.00E+00	4.19E+00	4.53E+01

**Table 6 - 38 Base Year 1990 National Emission Estimates for
Tetrachloroethylene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Nonferrous Wire Drawing and Insulating	5.67E+01	0.04	1.08E+01	8.00E+00	0.00E+00	1.88E+01	8.30E+00	0.00E+00	0.00E+00	8.30E+00	2.71E+01
Ball and Roller Bearings Manufacturing	5.44E+01	0.04	1.65E+01	1.52E+00	0.00E+00	1.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E+01
Secondary Nonferrous Metals	5.43E+01	0.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.43E+01	0.00E+00	0.00E+00	5.43E+01	5.43E+01
Metals Service Centers and Offices	5.40E+01	0.04	5.40E+01	0.00E+00	0.00E+00	5.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.40E+01
Mechanical Rubber Goods Manufacturing	5.13E+01	0.04	2.02E+01	0.00E+00	0.00E+00	2.02E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.02E+01
Pharmaceuticals Production	4.94E+01	0.04	4.83E+01	1.12E+00	0.00E+00	4.94E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.94E+01
Construction Machinery Manufacturing	4.91E+01	0.04	4.91E+01	0.00E+00	0.00E+00	4.91E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.91E+01
Rubber and Plastic Hose and Belting	4.74E+01	0.04	4.74E+01	0.00E+00	0.00E+00	4.74E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.74E+01
Industrial Machinery, nec	4.58E+01	0.04	4.55E+01	0.00E+00	0.00E+00	4.55E+01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	4.58E+01
Cathode Ray Television Picture Tubes Manufacturing	4.50E+01	0.04	4.50E+01	0.00E+00	0.00E+00	4.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E+01
Electrical Equipment and Supplies, nec	4.43E+01	0.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.91E+01	5.16E+00	0.00E+00	4.43E+01	4.43E+01
Valves and Pipe Fittings Manufacturing	4.24E+01	0.03	4.24E+01	0.00E+00	0.00E+00	4.24E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.24E+01
Ordnance and Accessories Manufacturing	3.94E+01	0.03	3.94E+01	0.00E+00	0.00E+00	3.94E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.94E+01
Plumbing Fixture Fittings and Trim	3.93E+01	0.03	3.92E+01	1.25E-01	0.00E+00	3.93E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.93E+01
Automotive stampings	3.88E+01	0.03	3.86E+01	2.50E-01	0.00E+00	3.88E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.88E+01
Friction Products Manufacturing	3.77E+01	0.03	2.66E+01	1.40E+00	0.00E+00	2.80E+01	3.60E+00	1.90E-01	0.00E+00	3.79E+00	3.18E+01
Primary Metal Products Manufacturing	3.74E+01	0.03	3.74E+01	0.00E+00	0.00E+00	3.74E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E+01

**Table 6 - 38 Base Year 1990 National Emission Estimates for
Tetrachloroethylene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Commercial Printing, Letterpress, and Screen	3.69E+01	0.03	2.57E+01	1.12E+01	0.00E+00	3.69E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.69E+01
Motor and Generators Manufacturing	3.62E+01	0.03	4.13E+00	1.45E+01	0.00E+00	1.86E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E+01
Machine Tool Accessories	3.58E+01	0.03	1.02E+01	4.92E+00	0.00E+00	1.51E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E+01
Nonferrous Die-castings, Except Aluminum	3.19E+01	0.03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Small Arms Ammunition	3.19E+01	0.03	1.98E+01	0.00E+00	0.00E+00	1.98E+01	1.21E+01	0.00E+00	0.00E+00	1.21E+01	3.19E+01
Steel Wire and Related Products Manufacturing	3.07E+01	0.02	3.07E+01	0.00E+00	0.00E+00	3.07E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.07E+01
Metal Furniture (Surface Coating)	3.05E+01	0.02	3.05E+01	0.00E+00	0.00E+00	3.05E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.05E+01
Clay Products Manufacturing	2.98E+01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	2.50E-01	2.50E-01
Fabricated Pipe and Fittings	2.95E+01	0.02	2.15E+01	8.00E+00	0.00E+00	2.95E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.95E+01
Fabricated Plate Work (Boiler Shops)	2.95E+01	0.02	6.00E+00	0.00E+00	0.00E+00	6.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.00E+00
Chemicals and Allied Products Manufacturing	2.83E+01	0.02	2.83E+01	5.00E-03	0.00E+00	2.83E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.83E+01
Electronic Capacitors Manufacturing	2.79E+01	0.02	1.91E+01	6.98E+00	0.00E+00	2.61E+01	0.00E+00	1.75E+00	0.00E+00	1.75E+00	2.79E+01
Utility Boilers - Coal	2.70E+01	0.02	1.04E+01	0.00E+00	0.00E+00	1.04E+01	6.81E+00	0.00E+00	0.00E+00	6.81E+00	1.72E+01
Fluid Power Valves and Hose Fittings Manufacturing	2.68E+01	0.02	1.58E+01	0.00E+00	0.00E+00	1.58E+01	1.10E+01	0.00E+00	0.00E+00	1.10E+01	2.68E+01
Nonferrous Rolling and Drawing	2.52E+01	0.02	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Cutlery	2.49E+01	0.02	1.76E+01	0.00E+00	0.00E+00	1.76E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E+01
Relays and Industrial Controls	2.46E+01	0.02	1.53E+01	9.38E+00	0.00E+00	2.46E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E+01

**Table 6 - 38 Base Year 1990 National Emission Estimates for
Tetrachloroethylene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Coke By-Product Plants	2.40E+01	0.02	1.80E+01	0.00E+00	0.00E+00	1.80E+01	3.43E+00	0.00E+00	0.00E+00	3.43E+00	2.14E+01
Miscellaneous Plastics Products	2.39E+01	0.02	2.22E+01	0.00E+00	0.00E+00	2.22E+01	0.00E+00	1.68E+00	0.00E+00	1.68E+00	2.39E+01
Electrical Housewares and Fans	2.37E+01	0.02	2.37E+01	0.00E+00	0.00E+00	2.37E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E+01
Tire Production	2.36E+01	0.02	8.01E+00	8.09E-02	0.00E+00	8.09E+00	9.48E+00	9.57E-02	0.00E+00	9.57E+00	1.77E+01
Chemical Preparations	2.18E+01	0.02	1.70E+01	4.80E+00	0.00E+00	2.18E+01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	2.18E+01
Platemaking Services	1.91E+01	0.02	0.00E+00	1.90E+01	0.00E+00	1.90E+01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.91E+01
Marking Devices	1.86E+01	0.01	1.05E+01	8.16E+00	0.00E+00	1.86E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E+01
Commercial Printing, Lithographic	1.86E+01	0.01	1.03E+01	7.61E+00	0.00E+00	1.79E+01	0.00E+00	7.50E-01	0.00E+00	7.50E-01	1.86E+01
Polymers & Resins (I, II, and IV)	1.80E+01	0.01	1.77E+01	2.50E-01	0.00E+00	1.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E+01
Heating Equipment, Except Electric	1.79E+01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Space Propulsion Units and Parts Manufacturing	1.77E+01	0.01	1.77E+01	0.00E+00	0.00E+00	1.77E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E+01
Stainless and Non-stainless Steel Manufacture - EAF	1.62E+01	0.01	1.09E+01	9.33E-01	0.00E+00	1.18E+01	3.02E+00	3.60E-01	0.00E+00	3.38E+00	1.52E+01
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	1.57E+01	0.01	1.32E+01	0.00E+00	0.00E+00	1.32E+01	2.50E+00	0.00E+00	0.00E+00	2.50E+00	1.57E+01
Screw Machine Products Manufacturing	1.55E+01	0.01	1.06E+01	4.85E+00	0.00E+00	1.55E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E+01
Leather Tanning and Finishing Operations	1.42E+01	0.01	6.82E+00	7.58E-01	0.00E+00	7.58E+00	1.08E-03	1.20E-04	0.00E+00	1.20E-03	7.58E+00
Soap and Other Detergents Manufacturing	1.42E+01	0.01	1.02E+01	9.21E-01	0.00E+00	1.11E+01	0.00E+00	3.01E+00	0.00E+00	3.01E+00	1.42E+01
Steel Foundries	1.38E+01	0.01	9.20E+00	0.00E+00	0.00E+00	9.20E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E+00

**Table 6 - 38 Base Year 1990 National Emission Estimates for
Tetrachloroethylene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Fluid Meters and Counting Devices	1.34E+01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aluminum Rolling and Drawing, nec	1.30E+01	0.01	1.30E+01	0.00E+00	0.00E+00	1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E+01
Process Control Instruments	1.22E+01	0.01	0.00E+00	1.22E+01	0.00E+00	1.22E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E+01
Fabricated Metal Products Manufacturing	1.21E+01	0.01	1.21E+01	0.00E+00	0.00E+00	1.21E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E+01
Reinforced Plastic Composites Production	1.16E+01	0.01	6.43E+00	9.69E-01	0.00E+00	7.40E+00	2.60E+00	3.92E-01	0.00E+00	2.99E+00	1.04E+01
Radio and Television Communications Equipment (3662)	1.13E+01	0.01	0.00E+00	1.13E+01	0.00E+00	1.13E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E+01
Apparel and Accessories, nec	1.11E+01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cold Finishing of Steel Shapes	1.07E+01	0.01	1.07E+01	0.00E+00	0.00E+00	1.07E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+01
Search and Navigation Equipment	1.05E+01	0.01	1.05E+01	0.00E+00	0.00E+00	1.05E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E+01
Rubber and Plastic Hose and Belting Manufacturing	1.05E+01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E+01	0.00E+00	0.00E+00	1.05E+01	1.05E+01
Polishes and Sanitation Goods Manufacturing	1.03E+01	0.01	0.00E+00	1.01E+01	0.00E+00	1.01E+01	1.75E-01	0.00E+00	0.00E+00	1.75E-01	1.03E+01
Steel Springs, Except Wire	1.02E+01	0.01	1.02E+01	0.00E+00	0.00E+00	1.02E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E+01
Products of Purchased Glass	1.01E+01	0.01	1.01E+01	0.00E+00	0.00E+00	1.01E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E+01
Noncurrent-Carrying Wiring Devices	9.90E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.90E+00	0.00E+00	0.00E+00	9.90E+00	9.90E+00
Robes and Dressing Gowns	9.58E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lawn and Garden Equipment	9.50E+00	0.01	0.00E+00	9.50E+00	0.00E+00	9.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.50E+00
Trucking, Except Local	9.50E+00	0.01	0.00E+00	9.50E+00	0.00E+00	9.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.50E+00

**Table 6 - 38 Base Year 1990 National Emission Estimates for
Tetrachloroethylene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Primary Battery, Dry and Wet Manufacture	9.40E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.40E+00	0.00E+00	0.00E+00	9.40E+00	9.40E+00
Toilet Preparations Manufacturing	9.38E+00	0.01	0.00E+00	8.98E+00	0.00E+00	8.98E+00	0.00E+00	4.08E-01	0.00E+00	4.08E-01	9.38E+00
Commercial Lighting Fixtures	8.59E+00	0.01	0.00E+00	8.59E+00	0.00E+00	8.59E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.59E+00
Measuring and Dispensing Pumps	8.55E+00	0.01	0.00E+00	8.55E+00	0.00E+00	8.55E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.55E+00
Metalworking Machinery, nec	8.50E+00	0.01	0.00E+00	8.50E+00	0.00E+00	8.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.50E+00
Pumps and Pumping Equipment Manufacturing	8.01E+00	0.01	0.00E+00	8.01E+00	0.00E+00	8.01E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.01E+00
Carbon and Graphite Products	7.74E+00	0.01	7.74E+00	0.00E+00	0.00E+00	7.74E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.74E+00
Non-Vehicular IC Engines	7.63E+00	0.01	7.63E+00	0.00E+00	0.00E+00	7.63E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.63E+00
Secondary Nonferrous Metals Production	7.50E+00	0.01	0.00E+00	7.50E+00	0.00E+00	7.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E+00
Sheet Metal Work	6.77E+00	0.01	0.00E+00	6.77E+00	0.00E+00	6.77E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.77E+00
Hand and Edge Tools Manufacturing	5.92E+00	< 0.01	5.92E+00	0.00E+00	0.00E+00	5.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.92E+00
Wood Furniture (Surface Coating)	5.70E+00	< 0.01	0.00E+00	5.70E+00	0.00E+00	5.70E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.70E+00
Manifold Business Forms	5.50E+00	< 0.01	0.00E+00	5.50E+00	0.00E+00	5.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.50E+00
Jewelry, Precious Metal	5.20E+00	< 0.01	0.00E+00	5.20E+00	0.00E+00	5.20E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.20E+00
Space Vehicle Parts and Equipment, nec	4.85E+00	< 0.01	0.00E+00	4.85E+00	0.00E+00	4.85E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E+00
Welding Apparatus	4.80E+00	< 0.01	0.00E+00	4.80E+00	0.00E+00	4.80E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E+00
Pens and Mechanical Pencils	4.77E+00	< 0.01	4.77E+00	0.00E+00	0.00E+00	4.77E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.77E+00

**Table 6 - 38 Base Year 1990 National Emission Estimates for
Tetrachloroethylene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Machine tools, Metal Forming Types	4.71E+00	< 0.01	0.00E+00	4.71E+00	0.00E+00	4.71E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.71E+00
Miscellaneous Fabricated Metal Products	4.70E+00	< 0.01	0.00E+00	4.70E+00	0.00E+00	4.70E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.70E+00
Pressed and Blown Glass and Glassware Manufacturing	3.73E+00	< 0.01	0.00E+00	3.73E+00	0.00E+00	3.73E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.73E+00
Speed Changers, Drives, and Gears	3.65E+00	< 0.01	0.00E+00	3.65E+00	0.00E+00	3.65E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.65E+00
Adhesives and Sealants	3.26E+00	< 0.01	0.00E+00	2.31E+00	0.00E+00	2.31E+00	0.00E+00	2.50E-01	0.00E+00	2.50E-01	2.56E+00
Fabricated Structural Metal Manufacturing	3.10E+00	< 0.01	0.00E+00	3.10E+00	0.00E+00	3.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.10E+00
Fabricated Textile Products, nec	2.72E+00	< 0.01	2.72E+00	0.00E+00	0.00E+00	2.72E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.72E+00
Certified Air Trans	1.90E+00	< 0.01	1.90E+00	0.00E+00	0.00E+00	1.90E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+00
Lighting Equipment	1.89E+00	< 0.01	0.00E+00	1.89E+00	0.00E+00	1.89E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E+00
Hydrochloric Acid Production	1.84E+00	< 0.01	1.02E+00	1.55E-02	0.00E+00	1.03E+00	6.10E-02	9.28E-04	0.00E+00	6.19E-02	1.10E+00
Paints and Allied Products Manufacturing	1.84E+00	< 0.01	0.00E+00	1.21E+00	0.00E+00	1.21E+00	0.00E+00	1.28E-01	0.00E+00	1.28E-01	1.34E+00
Communications Equipment, nec	1.83E+00	< 0.01	0.00E+00	1.83E+00	0.00E+00	1.83E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+00
Electron Tubes Manufacturing	1.44E+00	< 0.01	0.00E+00	1.44E+00	0.00E+00	1.44E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E+00
Flat Glass	1.33E+00	< 0.01	0.00E+00	1.33E+00	0.00E+00	1.33E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E+00
Refuse Systems	1.10E+00	< 0.01	0.00E+00	1.10E+00	0.00E+00	1.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E+00
Surface Active Agents Manufacturing	9.59E-01	< 0.01	0.00E+00	9.59E-01	0.00E+00	9.59E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.59E-01
Sanitary Food Containers	9.00E-01	< 0.01	0.00E+00	9.00E-01	0.00E+00	9.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.00E-01

**Table 6 - 38 Base Year 1990 National Emission Estimates for
Tetrachloroethylene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Industrial Boilers	8.23E-01	< 0.01	4.96E-01	5.51E-02	0.00E+00	5.51E-01	1.11E-01	1.23E-02	0.00E+00	1.23E-01	6.75E-01
Paper Coating and Glazing Manufacturing	7.50E-01	< 0.01	0.00E+00	7.50E-01	0.00E+00	7.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E-01
Industrial Inorganic Chemical Manufacturing	6.21E-01	< 0.01	0.00E+00	6.21E-01	0.00E+00	6.21E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.21E-01
Cement, Hydraulic (not subject to Portland Cement MACT)	3.98E-01	< 0.01	0.00E+00	1.11E-01	0.00E+00	1.11E-01	0.00E+00	1.35E-01	0.00E+00	1.35E-01	2.46E-01
Chemicals and Allied Products, nec	3.83E-01	< 0.01	0.00E+00	2.58E-01	0.00E+00	2.58E-01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	3.83E-01
Miscellaneous Publishing	3.75E-01	< 0.01	0.00E+00	3.75E-01	0.00E+00	3.75E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-01
Leather Goods, nec	3.52E-01	< 0.01	0.00E+00	3.52E-01	0.00E+00	3.52E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-01
Petroleum Refining (not subject to Petroleum Refining MACT)	3.42E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Electronic Connectors	2.50E-01	< 0.01	2.50E-01	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Lubricating Oils and Greases	2.50E-01	< 0.01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Inorganic Pigments Manufacturing	2.10E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sewage Sludge Incineration	2.00E-01	< 0.01	0.00E+00	1.65E-01	0.00E+00	1.65E-01	0.00E+00	2.64E-02	0.00E+00	2.64E-02	1.92E-01
Steel Pipe and Tubes Manufacturing	1.45E-01	< 0.01	0.00E+00	1.45E-01	0.00E+00	1.45E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-01
Plywood/Particle Board Manufacturing	1.36E-01	< 0.01	1.06E-02	2.71E-04	0.00E+00	1.08E-02	4.24E-02	1.09E-03	0.00E+00	4.35E-02	5.43E-02
Bags, Except Textile Bags	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Industrial Gases Manufacturing	1.25E-01	< 0.01	1.25E-01	0.00E+00	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Soaps, Cleaners, and Toilet Goods	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01

**Table 6 - 38 Base Year 1990 National Emission Estimates for
Tetrachloroethylene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	
Institutional/Commercial Heating	8.76E-02	< 0.01	0.00E+00	6.83E-02	0.00E+00	6.83E-02	0.00E+00	1.14E-02	0.00E+00	1.14E-02	7.97E-02
Residential Heating: Bituminous and Lignite Coal Combustion	4.15E-02	< 0.01	0.00E+00	2.88E-02	0.00E+00	2.88E-02	0.00E+00	5.88E-03	0.00E+00	5.88E-03	3.47E-02
Utility Boilers - Coke	2.00E-02	< 0.01	1.50E-02	0.00E+00	0.00E+00	1.50E-02	2.86E-03	0.00E+00	0.00E+00	2.86E-03	1.79E-02
Ophthalmic Goods	1.75E-02	< 0.01	0.00E+00	1.75E-02	0.00E+00	1.75E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E-02
Residential Heating: Anthracite Coal Combustion	1.57E-02	< 0.01	0.00E+00	1.09E-02	0.00E+00	1.09E-02	0.00E+00	2.22E-03	0.00E+00	2.22E-03	1.31E-02
Special Dies, Tools, Jigs and Fixtures	5.00E-03	< 0.01	0.00E+00	5.00E-03	0.00E+00	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03
Nonmetallic Mineral Products Manufacturing	3.50E-03	< 0.01	0.00E+00	3.50E-03	0.00E+00	3.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-03
Metal Valves	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Mining Machinery Manufacturing	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03

**Table 6 - 39 Base Year 1990 National Emission Estimates for
Trichloroethylene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Halogenated Solvent Cleaners	4.07E+04	54.17	2.17E+04	9.28E+03	0.00E+00	3.09E+04	3.70E+03	1.59E+03	0.00E+00	5.29E+03	3.62E+04
Aerospace Industries	1.55E+04	20.68	1.38E+04	5.16E+02	0.00E+00	1.44E+04	7.35E+02	2.70E+01	0.00E+00	7.62E+02	1.51E+04
Plastic Parts and Products (Surface Coating)	2.12E+03	2.82	1.33E+03	7.20E+01	0.00E+00	1.40E+03	5.31E+02	6.32E+00	0.00E+00	5.38E+02	1.94E+03
Large Appliance (Surface Coating)	1.52E+03	2.02	5.26E+02	1.81E+01	0.00E+00	5.44E+02	7.07E+02	0.00E+00	0.00E+00	7.07E+02	1.25E+03
Plating And Polishing	1.16E+03	1.54	8.25E+02	1.41E+02	0.00E+00	9.66E+02	7.47E+01	2.98E+01	0.00E+00	1.05E+02	1.07E+03
Pulp and Paper Production (non-combustion) MACT I	8.15E+02	1.08	1.52E+02	0.00E+00	0.00E+00	1.52E+02	2.79E+02	0.00E+00	0.00E+00	2.79E+02	4.31E+02
Fabricated Metal Products, nec	6.48E+02	0.86	4.79E+02	3.62E+01	0.00E+00	5.16E+02	6.67E+01	2.01E+01	0.00E+00	8.67E+01	6.02E+02
Hardware Manufacturing	6.47E+02	0.86	4.23E+02	0.00E+00	0.00E+00	4.23E+02	1.33E+02	5.00E-03	0.00E+00	1.33E+02	5.57E+02
Printing, Coating, and Dyeing of Fabrics	6.31E+02	0.84	1.89E+02	2.07E+00	0.00E+00	1.91E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E+02
Steel Pipe and Tubes Manufacturing	5.29E+02	0.70	1.14E+02	6.22E+00	0.00E+00	1.21E+02	3.46E+02	0.00E+00	0.00E+00	3.46E+02	4.67E+02
Metal Stampings Manufacturing	5.29E+02	0.70	3.77E+02	6.32E+01	0.00E+00	4.40E+02	7.45E+01	0.00E+00	0.00E+00	7.45E+01	5.14E+02
Concrete Block and Brick	4.65E+02	0.62	4.65E+02	0.00E+00	0.00E+00	4.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.65E+02
Municipal Landfills	4.29E+02	0.57	2.95E+01	2.68E+02	0.00E+00	2.98E+02	6.02E+00	5.48E+01	0.00E+00	6.08E+01	3.59E+02
Carburetors, Pistons, Rings and Valves Manufacturing	3.60E+02	0.48	1.44E+02	0.00E+00	0.00E+00	1.44E+02	2.07E+02	8.21E+00	0.00E+00	2.15E+02	3.60E+02
Electronic Capacitors Manufacturing	2.84E+02	0.38	1.75E+02	7.76E+00	0.00E+00	1.83E+02	5.99E+01	6.50E+00	0.00E+00	6.64E+01	2.49E+02
Stainless and Non-stainless Steel Manufacture - EAF	2.77E+02	0.37	1.85E+02	1.59E+01	0.00E+00	2.01E+02	5.15E+01	6.14E+00	0.00E+00	5.77E+01	2.59E+02
Bolts, Nuts, Rivets and Washers Manufacturing	2.47E+02	0.33	1.42E+02	2.25E+00	0.00E+00	1.44E+02	5.35E+01	0.00E+00	0.00E+00	5.35E+01	1.98E+02

**Table 6 - 39 Base Year 1990 National Emission Estimates for
Trichloroethylene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Cutlery	2.43E+02	0.32	1.33E+02	0.00E+00	0.00E+00	1.33E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E+02
Screw Machine Products Manufacturing	2.30E+02	0.31	9.69E+01	6.46E+01	0.00E+00	1.61E+02	0.00E+00	7.84E+00	0.00E+00	7.84E+00	1.69E+02
Metal Heat Treating Manufacturing	2.10E+02	0.28	1.94E+02	9.66E+00	0.00E+00	2.04E+02	0.00E+00	6.13E+00	0.00E+00	6.13E+00	2.10E+02
Fabricated Rubber Products, nec	1.96E+02	0.26	3.96E+01	1.21E+01	0.00E+00	5.17E+01	8.84E+01	4.11E+00	0.00E+00	9.25E+01	1.44E+02
Electronic Connectors	1.89E+02	0.25	1.03E+02	1.81E+01	0.00E+00	1.21E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E+02
Instruments to Measure Electricity	1.88E+02	0.25	0.00E+00	8.75E+00	0.00E+00	8.75E+00	1.20E+02	0.00E+00	0.00E+00	1.20E+02	1.29E+02
Blast Furnaces and Steel Mills	1.80E+02	0.24	3.30E-01	0.00E+00	0.00E+00	3.30E-01	9.45E+01	0.00E+00	0.00E+00	9.45E+01	9.48E+01
Manufacturing Industries, nec	1.76E+02	0.23	1.47E+02	1.53E+01	0.00E+00	1.62E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E+02
Ordnance and Accessories Manufacturing	1.76E+02	0.23	2.40E+01	0.00E+00	0.00E+00	2.40E+01	1.52E+02	0.00E+00	0.00E+00	1.52E+02	1.76E+02
Fabricated Pipe and Fittings	1.68E+02	0.22	4.66E+01	3.01E+00	0.00E+00	4.96E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.96E+01
Copper Rolling and Drawing	1.68E+02	0.22	1.11E+01	5.61E+00	0.00E+00	1.67E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E+01
Surgical and Medical Instruments Manufacturing	1.51E+02	0.20	1.44E+02	6.27E+00	0.00E+00	1.51E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E+02
Silverware and Plated Ware	1.48E+02	0.20	1.40E+02	7.50E+00	0.00E+00	1.48E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E+02
Primary Battery, Dry and Wet Manufacture	1.47E+02	0.20	9.19E+01	0.00E+00	0.00E+00	9.19E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.19E+01
Process Control Instruments	1.42E+02	0.19	1.40E+02	2.06E+00	0.00E+00	1.42E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E+02
Miscellaneous Fabricated Metal Products	1.37E+02	0.18	1.58E+01	9.86E+00	0.00E+00	2.57E+01	1.00E+02	0.00E+00	0.00E+00	1.00E+02	1.26E+02
Cathode Ray Television Picture Tubes Manufacturing	1.33E+02	0.18	7.45E+01	9.50E+00	0.00E+00	8.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.40E+01

Table 6 - 39 Base Year 1990 National Emission Estimates for Trichloroethylene

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Pharmaceuticals Production	1.32E+02	0.18	1.09E+02	3.36E+00	0.00E+00	1.12E+02	1.02E+01	3.16E-01	0.00E+00	1.05E+01	1.23E+02
Plywood/Particle Board Manufacturing	1.27E+02	0.17	9.90E+00	2.54E-01	0.00E+00	1.01E+01	3.97E+01	1.02E+00	0.00E+00	4.07E+01	5.09E+01
Metal Furniture (Surface Coating)	1.23E+02	0.16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.14E+01	0.00E+00	0.00E+00	7.14E+01	7.14E+01
Valves and Pipe Fittings Manufacturing	1.18E+02	0.16	6.13E+01	2.66E+01	0.00E+00	8.79E+01	0.00E+00	8.51E+00	0.00E+00	8.51E+00	9.64E+01
Electrical Equipment and Supplies, nec	1.17E+02	0.16	0.00E+00	1.26E+01	0.00E+00	1.26E+01	9.79E+01	6.62E+00	0.00E+00	1.05E+02	1.17E+02
Electrical Housewares and Fans	1.16E+02	0.15	3.15E+01	0.00E+00	0.00E+00	3.15E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E+01
Metal Can (Surface Coating)	1.14E+02	0.15	1.03E+02	0.00E+00	0.00E+00	1.03E+02	1.12E+01	0.00E+00	0.00E+00	1.12E+01	1.14E+02
Steel Foundries	1.13E+02	0.15	1.13E+02	0.00E+00	0.00E+00	1.13E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E+02
Noncurrent-Carrying Wiring Devices	1.08E+02	0.14	9.00E+01	0.00E+00	0.00E+00	9.00E+01	1.85E+01	0.00E+00	0.00E+00	1.85E+01	1.08E+02
Semiconductor Manufacturing	1.08E+02	0.14	1.04E+02	4.42E+00	0.00E+00	1.08E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E+02
Metal coating and allied services (3479)	1.07E+02	0.14	6.92E+01	1.56E+01	0.00E+00	8.48E+01	1.29E+01	0.00E+00	0.00E+00	1.29E+01	9.77E+01
Jewelry, Precious Metal	1.06E+02	0.14	0.00E+00	7.51E+00	0.00E+00	7.51E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.51E+00
Iron Foundries	1.02E+02	0.14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E+01	0.00E+00	0.00E+00	1.29E+01	1.29E+01
Secondary Nonferrous Metals Production	9.88E+01	0.13	9.88E+01	0.00E+00	0.00E+00	9.88E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.88E+01
Electronic Components, nec	9.43E+01	0.13	2.87E+01	1.67E+01	0.00E+00	4.55E+01	3.81E+01	9.33E+00	0.00E+00	4.75E+01	9.29E+01
Saw Blades and Handsaws	9.05E+01	0.12	1.47E+01	0.00E+00	0.00E+00	1.47E+01	7.57E+01	0.00E+00	0.00E+00	7.57E+01	9.05E+01
Small Arms Ammunition	8.93E+01	0.12	8.93E+01	0.00E+00	0.00E+00	8.93E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.93E+01

**Table 6 - 39 Base Year 1990 National Emission Estimates for
Trichloroethylene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Friction Products Manufacturing	8.80E+01	0.12	6.21E+01	3.27E+00	0.00E+00	6.54E+01	8.41E+00	4.42E-01	0.00E+00	8.85E+00	7.42E+01
Wire Springs	8.78E+01	0.12	7.52E+01	0.00E+00	0.00E+00	7.52E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.52E+01
Electron Tubes Manufacturing	8.66E+01	0.12	2.16E+01	0.00E+00	0.00E+00	2.16E+01	6.50E+01	0.00E+00	0.00E+00	6.50E+01	8.66E+01
Mechanical Rubber Goods Manufacturing	8.40E+01	0.11	7.55E+01	0.00E+00	0.00E+00	7.55E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.55E+01
Electrical Industrial Apparatus, nec	8.13E+01	0.11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E+00	0.00E+00	3.28E+00	3.28E+00
Space Vehicle Parts and Equipment, nec	8.10E+01	0.11	8.10E+01	0.00E+00	0.00E+00	8.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.10E+01
Industrial Organic Chemicals Manufacturing	7.74E+01	0.10	7.48E+01	2.44E+00	0.00E+00	7.72E+01	1.87E-01	0.00E+00	0.00E+00	1.87E-01	7.74E+01
Speed Changers, Drives, and Gears	7.37E+01	0.10	0.00E+00	1.05E+00	0.00E+00	1.05E+00	7.26E+01	0.00E+00	0.00E+00	7.26E+01	7.37E+01
Machine Tool Accessories	7.35E+01	0.10	4.12E+01	1.25E-01	0.00E+00	4.13E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.13E+01
Residential lighting fixtures	7.24E+01	0.10	7.24E+01	0.00E+00	0.00E+00	7.24E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.24E+01
Electronic Resistors	7.24E+01	0.10	3.31E+00	6.00E+00	0.00E+00	9.31E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.31E+00
MON	7.20E+01	0.10	5.22E+01	5.27E-01	0.00E+00	5.27E+01	8.47E+00	8.55E-02	0.00E+00	8.55E+00	6.13E+01
Ammunition, Except for Small Arms	6.94E+01	0.09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.86E+01	7.75E-01	0.00E+00	6.94E+01	6.94E+01
Aluminum Die-Castings	6.92E+01	0.09	5.53E+01	6.82E+00	0.00E+00	6.21E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.21E+01
Miscellaneous Metal Work	6.38E+01	0.08	0.00E+00	6.25E+00	0.00E+00	6.25E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.25E+00
Fabricated Plate Work (Boiler Shops)	6.12E+01	0.08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E+01	0.00E+00	0.00E+00	1.64E+01	1.64E+01
Unsupported Plastics Film & Sheet	6.11E+01	0.08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.11E+01	0.00E+00	0.00E+00	6.11E+01	6.11E+01

**Table 6 - 39 Base Year 1990 National Emission Estimates for
Trichloroethylene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Consumer Products Usage	6.04E+01	0.08	0.00E+00	4.19E+01	0.00E+00	4.19E+01	0.00E+00	8.56E+00	0.00E+00	8.56E+00	5.05E+01
Internal Combustion Engine Manufacturing	5.89E+01	0.08	2.79E+01	0.00E+00	0.00E+00	2.79E+01	3.10E+01	0.00E+00	0.00E+00	3.10E+01	5.89E+01
Photographic Equipment And Supplies	5.75E+01	0.08	5.70E+01	5.00E-01	0.00E+00	5.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.75E+01
Aluminum Rolling and Drawing, nec	5.50E+01	0.07	5.50E+01	0.00E+00	0.00E+00	5.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.50E+01
Motor and Generators Manufacturing	5.31E+01	0.07	1.19E+01	6.44E+00	0.00E+00	1.84E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E+01
Power Driven Handtools	4.99E+01	0.07	3.77E+01	5.00E-01	0.00E+00	3.82E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.82E+01
Engine Electric Equipment	4.97E+01	0.07	1.12E+01	0.00E+00	0.00E+00	1.12E+01	1.88E+01	0.00E+00	0.00E+00	1.88E+01	3.00E+01
Primary Metal Products Manufacturing	4.68E+01	0.06	0.00E+00	1.89E+01	0.00E+00	1.89E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E+01
Nonferrous Wire Drawing and Insulating	4.51E+01	0.06	4.51E+01	0.00E+00	0.00E+00	4.51E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.51E+01
Lubricating Oils and Greases	4.47E+01	0.06	3.41E+01	1.06E+01	0.00E+00	4.47E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.47E+01
Space Propulsion Units and Parts Manufacturing	4.42E+01	0.06	8.93E+00	0.00E+00	0.00E+00	8.93E+00	5.69E+00	0.00E+00	0.00E+00	5.69E+00	1.46E+01
Prefabricated Metal Buildings	4.39E+01	0.06	3.20E+01	0.00E+00	0.00E+00	3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.20E+01
Automotive stampings	4.35E+01	0.06	3.70E+01	2.30E+00	0.00E+00	3.93E+01	0.00E+00	4.25E+00	0.00E+00	4.25E+00	4.35E+01
Clay Products Manufacturing	4.21E+01	0.06	2.11E-01	0.00E+00	0.00E+00	2.11E-01	2.65E+01	0.00E+00	0.00E+00	2.65E+01	2.67E+01
Sheet Metal Work	4.13E+01	0.05	3.08E+01	0.00E+00	0.00E+00	3.08E+01	1.05E+01	0.00E+00	0.00E+00	1.05E+01	4.13E+01
Metal Barrels, Drums, and Pails Manufacturing	4.03E+01	0.05	4.03E+01	0.00E+00	0.00E+00	4.03E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.03E+01
Watches, Clocks, Watchcases, and Parts	3.87E+01	0.05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.87E+01	0.00E+00	0.00E+00	3.87E+01	3.87E+01

Table 6 - 39 Base Year 1990 National Emission Estimates for Trichloroethylene

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
National Security	3.83E+01	0.05	3.83E+01	0.00E+00	0.00E+00	3.83E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.83E+01
Aluminum Sheet, Plate, and Foil manufacturing	3.48E+01	0.05	3.48E+01	0.00E+00	0.00E+00	3.48E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.48E+01
Nonferrous Rolling and Drawing	3.39E+01	0.05	3.39E+01	0.00E+00	0.00E+00	3.39E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.39E+01
Fluid Power Valves and Hose Fittings Manufacturing	3.26E+01	0.04	1.26E+01	0.00E+00	0.00E+00	1.26E+01	2.00E+01	0.00E+00	0.00E+00	2.00E+01	3.26E+01
Chemicals and Allied Products Manufacturing	3.16E+01	0.04	6.00E-01	5.00E-03	0.00E+00	6.05E-01	3.10E+01	0.00E+00	0.00E+00	3.10E+01	3.16E+01
Needles, Pins, Hooks and Eyes and Similar Notions	3.02E+01	0.04	1.01E+01	0.00E+00	0.00E+00	1.01E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E+01
Elevators and Moving Stairways Manufacturing	3.01E+01	0.04	2.57E+01	4.41E+00	0.00E+00	3.01E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.01E+01
Telephone and Telegraph Apparatus	2.97E+01	0.04	2.33E+01	6.44E+00	0.00E+00	2.97E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.97E+01
Optical Instruments and Lenses	2.92E+01	0.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.92E+01	0.00E+00	0.00E+00	0.00E+00	2.92E+01
Electronic Components and Accessories	2.91E+01	0.04	1.62E+01	0.00E+00	0.00E+00	1.62E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E+01
Blankbooks and Looseleaf Binders	2.84E+01	0.04	2.84E+01	0.00E+00	0.00E+00	2.84E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E+01
Hand and Edge Tools Manufacturing	2.83E+01	0.04	1.82E+01	0.00E+00	0.00E+00	1.82E+01	0.00E+00	5.03E+00	0.00E+00	5.03E+00	2.33E+01
Nonferrous Die-castings, Except Aluminum	2.76E+01	0.04	0.00E+00	1.98E+01	0.00E+00	1.98E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E+01
Commercial Printing, Lithographic	2.73E+01	0.04	4.62E+00	0.00E+00	0.00E+00	4.62E+00	2.26E+01	0.00E+00	0.00E+00	2.26E+01	2.73E+01
Coke By-Product Plants	2.72E+01	0.04	2.04E+01	0.00E+00	0.00E+00	2.04E+01	3.89E+00	0.00E+00	0.00E+00	3.89E+00	2.43E+01
Iron and Steel Forging	2.64E+01	0.04	2.11E+01	5.32E+00	0.00E+00	2.64E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.64E+01
Hydrochloric Acid Production	2.55E+01	0.03	1.41E+01	2.14E-01	0.00E+00	1.43E+01	8.42E-01	1.28E-02	0.00E+00	8.55E-01	1.51E+01

Table 6 - 39 Base Year 1990 National Emission Estimates for Trichloroethylene

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Chemical Manufacturing: Trichloroethylene	2.51E+01	0.03	8.19E+00	0.00E+00	0.00E+00	8.19E+00	1.69E+01	0.00E+00	0.00E+00	1.69E+01	2.51E+01
Products of Purchased Glass	2.47E+01	0.03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Plumbing Fixture Fittings and Trim	2.45E+01	0.03	1.92E+01	1.90E-01	0.00E+00	1.94E+01	0.00E+00	5.08E+00	0.00E+00	5.08E+00	2.45E+01
Pens and Mechanical Pencils	2.42E+01	0.03	1.73E+01	0.00E+00	0.00E+00	1.73E+01	6.83E+00	0.00E+00	0.00E+00	6.83E+00	2.42E+01
Machine tools, Metal Forming Types	2.38E+01	0.03	2.38E+01	0.00E+00	0.00E+00	2.38E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E+01
Metal Doors, Sash, and Trim	2.31E+01	0.03	1.43E+01	2.60E+00	0.00E+00	1.69E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E+01
Nonferrous Forgings	2.29E+01	0.03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E+01	0.00E+00	0.00E+00	2.29E+01	2.29E+01
Switchgear and Switchboard Apparatus	2.21E+01	0.03	2.05E+01	1.63E+00	0.00E+00	2.21E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E+01
Machine tools, Metal Cutting Types	2.21E+01	0.03	2.20E+01	0.00E+00	0.00E+00	2.20E+01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	2.21E+01
Publicly Owned Treatment Works (POTW) Emissions	2.21E+01	0.03	6.07E-01	1.47E+01	0.00E+00	1.53E+01	1.24E-01	3.00E+00	0.00E+00	3.12E+00	1.84E+01
Fluid Power Pumps and Motors	2.20E+01	0.03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E+01	0.00E+00	0.00E+00	2.20E+01	2.20E+01
Radio and Television Communications Equipment (3662)	2.10E+01	0.03	1.05E+01	8.31E+00	0.00E+00	1.88E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E+01
Ophthalmic Goods	2.03E+01	0.03	5.61E+00	2.92E+00	0.00E+00	8.53E+00	1.18E+01	0.00E+00	0.00E+00	1.18E+01	2.03E+01
Aluminum Extruded Products	1.72E+01	0.02	1.58E+01	0.00E+00	0.00E+00	1.58E+01	0.00E+00	1.32E+00	0.00E+00	1.32E+00	1.72E+01
Plumbing, Heating, Air-conditioning	1.68E+01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Shipbuilding and Ship Repair (Surface Coating)	1.60E+01	0.02	1.20E+01	2.44E-01	0.00E+00	1.22E+01	2.32E+00	4.74E-02	0.00E+00	2.37E+00	1.46E+01
Blowers and Fans	1.58E+01	0.02	1.58E+01	0.00E+00	0.00E+00	1.58E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E+01

Table 6 - 39 Base Year 1990 National Emission Estimates for Trichloroethylene

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Food Products Machinery Manufacturing	1.57E+01	0.02	1.57E+01	0.00E+00	0.00E+00	1.57E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E+01
Food Products Machinery	1.57E+01	0.02	1.57E+01	0.00E+00	0.00E+00	1.57E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E+01
Relays and Industrial Controls	1.53E+01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E+01	0.00E+00	0.00E+00	1.53E+01	1.53E+01
Railroad Equipment Manufacturing	1.48E+01	0.02	0.00E+00	9.08E+00	0.00E+00	9.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.08E+00
Measuring and Controlling Devices, nec	1.47E+01	0.02	0.00E+00	8.98E+00	0.00E+00	8.98E+00	0.00E+00	5.70E+00	0.00E+00	5.70E+00	1.47E+01
Commercial Lighting Fixtures	1.41E+01	0.02	1.41E+01	0.00E+00	0.00E+00	1.41E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E+01
Architectural Metal Work	1.41E+01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Miscellaneous Manufactures (3990)	1.31E+01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Storage Batteries Manufacturing	1.30E+01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E+01	0.00E+00	0.00E+00	1.30E+01	1.30E+01
Fiber Cans, Drums, and Similar Products	1.20E+01	0.02	1.20E+01	0.00E+00	0.00E+00	1.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E+01
Nonferrous Foundries, nec	1.20E+01	0.02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E+01	0.00E+00	0.00E+00	1.20E+01	1.20E+01
Engineering, Laboratory, Scientific and Research	1.15E+01	0.02	1.15E+01	0.00E+00	0.00E+00	1.15E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E+01
Wood Partitions and Fixtures	1.09E+01	0.01	7.60E+00	3.32E+00	0.00E+00	1.09E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E+01
Electrical Apparatus and Equipment	1.06E+01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gaskets, Packing and Sealing Devices	1.06E+01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Construction Machinery Manufacturing	1.03E+01	0.01	5.36E+00	0.00E+00	0.00E+00	5.36E+00	4.95E+00	0.00E+00	0.00E+00	4.95E+00	1.03E+01
Rubber and Plastic Hose and Belting Manufacturing	1.00E+01	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**Table 6 - 39 Base Year 1990 National Emission Estimates for
Trichloroethylene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Carbon and Graphite Products	9.92E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tires and Inner Tubes (not subject to Tire Production MACT)	9.69E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Miscellaneous Plastics Products	9.51E+00	0.01	6.63E+00	0.00E+00	0.00E+00	6.63E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E+00
Polymers & Resins (I, II, and IV)	9.35E+00	0.01	8.21E+00	4.58E-01	0.00E+00	8.67E+00	6.84E-01	0.00E+00	0.00E+00	6.84E-01	9.35E+00
Search and Navigation Equipment	9.35E+00	0.01	4.30E+00	5.05E+00	0.00E+00	9.35E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.35E+00
Industrial Machinery, nec	8.67E+00	0.01	0.00E+00	4.22E+00	0.00E+00	4.22E+00	0.00E+00	4.45E+00	0.00E+00	4.45E+00	8.67E+00
Steel Wire and Related Products Manufacturing	8.63E+00	0.01	6.17E+00	0.00E+00	0.00E+00	6.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.17E+00
Special Dies, Tools, Jigs and Fixtures	8.10E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.10E+00	0.00E+00	8.10E+00	8.10E+00
Household Audio and Video Equipment	8.00E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.00E+00	0.00E+00	8.00E+00	8.00E+00
Environmental Controls Manufacturing	7.88E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.88E+00	0.00E+00	7.88E+00	7.88E+00
Tire Production	6.82E+00	0.01	2.31E+00	2.34E-02	0.00E+00	2.34E+00	2.74E+00	2.76E-02	0.00E+00	2.76E+00	5.10E+00
Dental Equipment and Supplies	6.67E+00	0.01	0.00E+00	6.67E+00	0.00E+00	6.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.67E+00
Textile Machinery	6.50E+00	0.01	0.00E+00	6.50E+00	0.00E+00	6.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.50E+00
Pumps and Pumping Equipment Manufacturing	6.50E+00	0.01	0.00E+00	6.50E+00	0.00E+00	6.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.50E+00
Paper and Other Webs (Surface Coating)	6.40E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.40E+00	0.00E+00	6.40E+00	6.40E+00
Industrial Furnaces and Ovens	6.27E+00	0.01	0.00E+00	6.27E+00	0.00E+00	6.27E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.27E+00
Miscellaneous Fabricated Wire Products	6.09E+00	0.01	0.00E+00	6.09E+00	0.00E+00	6.09E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.09E+00

**Table 6 - 39 Base Year 1990 National Emission Estimates for
Trichloroethylene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Fluid Meters and Counting Devices	6.08E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Commercial Laundry Equipment	6.03E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Automatic Vending Machines	5.93E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Metal Sanitary Ware Manufacturing	5.93E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Wood Furniture (Surface Coating)	5.83E+00	0.01	0.00E+00	5.83E+00	0.00E+00	5.83E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.83E+00
Printing/Publishing (Surface Coating)	5.66E+00	0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.66E+00	0.00E+00	5.66E+00	5.66E+00
Electric Lamps	5.53E+00	0.01	0.00E+00	3.40E+00	0.00E+00	3.40E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.40E+00
Cold Finishing of Steel Shapes	5.00E+00	0.01	0.00E+00	5.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E+00
Industrial Controls	4.48E+00	0.01	0.00E+00	3.98E+00	0.00E+00	3.98E+00	0.00E+00	5.00E-01	0.00E+00	5.00E-01	4.48E+00
Computer Terminals	3.83E+00	0.01	0.00E+00	3.83E+00	0.00E+00	3.83E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.83E+00
Analytical Instruments	3.33E+00	< 0.01	3.33E+00	0.00E+00	0.00E+00	3.33E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E+00
Adhesives and Sealants	2.78E+00	< 0.01	0.00E+00	2.78E+00	0.00E+00	2.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.78E+00
Special Industry Machinery, nec	2.31E+00	< 0.01	0.00E+00	2.19E+00	0.00E+00	2.19E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	2.31E+00
Radio and Television Communications Equipment (3663)	1.88E+00	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E+00	0.00E+00	1.88E+00	1.88E+00
Petroleum Refining (not subject to Petroleum Refining MACT)	1.53E+00	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.40E+00	0.00E+00	0.00E+00	1.40E+00	1.53E+00
Chemicals and Allied Products, nec	1.45E+00	< 0.01	0.00E+00	1.20E+00	0.00E+00	1.20E+00	0.00E+00	2.50E-01	0.00E+00	2.50E-01	1.45E+00
Asphalt Roofing Manufacturing	1.27E+00	< 0.01	1.27E+00	0.00E+00	0.00E+00	1.27E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E+00

Table 6 - 39 Base Year 1990 National Emission Estimates for Trichloroethylene

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	1.26E+00	< 0.01	1.11E+00	1.25E-01	0.00E+00	1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E+00
Agricultural Chemicals and Pesticides	1.04E+00	< 0.01	2.17E-01	8.20E-01	0.00E+00	1.04E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E+00
Paints and Allied Products Manufacturing	1.01E+00	< 0.01	0.00E+00	5.14E-01	0.00E+00	5.14E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.14E-01
Chemical Preparations	9.50E-01	< 0.01	0.00E+00	9.50E-01	0.00E+00	9.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.50E-01
Transformers, Except Electronic	6.80E-01	< 0.01	0.00E+00	6.80E-01	0.00E+00	6.80E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-01
Secondary Lead Smelting	6.31E-01	< 0.01	4.37E-01	3.80E-02	0.00E+00	4.75E-01	8.92E-03	7.76E-04	0.00E+00	9.69E-03	4.85E-01
Industrial Inorganic Chemical Manufacturing	6.00E-01	< 0.01	0.00E+00	6.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.00E-01
Cement, Hydraulic (not subject to Portland Cement MACT)	5.58E-01	< 0.01	0.00E+00	3.80E-02	0.00E+00	3.80E-02	0.00E+00	3.65E-02	0.00E+00	3.65E-02	7.45E-02
Wood Products	5.00E-01	< 0.01	0.00E+00	5.00E-01	0.00E+00	5.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-01
Sewage Sludge Incineration	3.65E-01	< 0.01	0.00E+00	3.01E-01	0.00E+00	3.01E-01	0.00E+00	4.81E-02	0.00E+00	4.81E-02	3.49E-01
Polishes and Sanitation Goods Manufacturing	3.30E-01	< 0.01	0.00E+00	2.75E-01	0.00E+00	2.75E-01	5.50E-02	0.00E+00	0.00E+00	5.50E-02	3.30E-01
Household Vacuum Cleaners	2.50E-01	< 0.01	0.00E+00	2.50E-01	0.00E+00	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01
Pressed and Blown Glass and Glassware Manufacturing	1.69E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Industrial Gases Manufacturing	1.28E-01	< 0.01	1.28E-01	0.00E+00	0.00E+00	1.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01
Metal Forgings and Stampings	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Metal Services, nec	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01
Metalworking Machinery	1.25E-01	< 0.01	0.00E+00	1.25E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01

**Table 6 - 39 Base Year 1990 National Emission Estimates for
Trichloroethylene**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	
Space Research and Technology	1.25E-01	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	1.25E-01	1.25E-01
Lighting Equipment	2.50E-02	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Brooms and Brushes	5.50E-03	< 0.01	0.00E+00	5.50E-03	0.00E+00	5.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.50E-03
Nonmetallic Mineral Products Manufacturing	2.50E-03	< 0.01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	1.00E-03	< 0.01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 6 - 40 Base Year 1990 National Emission Estimates for Vinyl Chloride

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Polyvinyl Chloride and Copolymers Production	1.15E+03	42.54	7.86E+02	4.56E+01	0.00E+00	8.32E+02	2.07E+02	1.20E+01	0.00E+00	2.19E+02	1.05E+03
Municipal Landfills	5.31E+02	19.66	3.65E+01	3.32E+02	0.00E+00	3.69E+02	7.45E+00	6.78E+01	0.00E+00	7.52E+01	4.44E+02
Polymers & Resins (I, II, and IV)	5.07E+02	18.76	3.64E+02	1.21E+01	0.00E+00	3.76E+02	7.62E+01	0.00E+00	0.00E+00	7.62E+01	4.52E+02
MON	3.52E+02	13.01	2.55E+02	2.58E+00	0.00E+00	2.58E+02	4.14E+01	4.18E-01	0.00E+00	4.18E+01	2.99E+02
Chemical Manufacturing: Tetrachloroethylene	6.70E+01	2.48	1.15E+01	0.00E+00	0.00E+00	1.15E+01	5.21E+01	0.00E+00	0.00E+00	5.21E+01	6.35E+01
Industrial Gases Manufacturing	2.67E+01	0.99	2.67E+01	0.00E+00	0.00E+00	2.67E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E+01
Hydrochloric Acid Production	2.50E+01	0.92	1.38E+01	2.10E-01	0.00E+00	1.40E+01	8.26E-01	1.26E-02	0.00E+00	8.39E-01	1.49E+01
Industrial Organic Chemicals Manufacturing	1.27E+01	0.47	2.51E+00	0.00E+00	0.00E+00	2.51E+00	1.02E+01	0.00E+00	0.00E+00	1.02E+01	1.27E+01
Tire Production	9.03E+00	0.33	3.06E+00	3.09E-02	0.00E+00	3.09E+00	3.62E+00	3.66E-02	0.00E+00	3.66E+00	6.76E+00
Unsupported Plastics Film & Sheet	7.20E+00	0.27	0.00E+00	7.20E+00	0.00E+00	7.20E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.20E+00
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	4.65E+00	0.17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)	3.62E+00	0.13	3.61E+00	5.00E-03	0.00E+00	3.62E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.62E+00
Sewage Sludge Incineration	3.31E+00	0.12	0.00E+00	2.73E+00	0.00E+00	2.73E+00	0.00E+00	4.37E-01	0.00E+00	4.37E-01	3.17E+00
Chemical Manufacturing: Methyl Chloroform	2.15E+00	0.08	1.42E+00	0.00E+00	0.00E+00	1.42E+00	7.28E-01	0.00E+00	0.00E+00	7.28E-01	2.15E+00
Agricultural Chemicals and Pesticides	6.56E-01	0.02	6.56E-01	0.00E+00	0.00E+00	6.56E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.56E-01
Plastic Parts and Products (Surface Coating)	4.25E-01	0.02	1.75E-01	0.00E+00	0.00E+00	1.75E-01	2.50E-01	0.00E+00	0.00E+00	2.50E-01	4.25E-01
Publicly Owned Treatment Works (POTW) Emissions	4.20E-01	0.02	1.16E-02	2.80E-01	0.00E+00	2.91E-01	2.36E-03	5.71E-02	0.00E+00	5.95E-02	3.51E-01

**Table 6 - 41 Base Year 1990 National Emission Estimates for
Vinylidene Chloride**

112(k) Source Category	Total Emissions (Urban and Rural)	% Contribution of Total Emissions	Urban-1 Emissions				Urban-2 Emissions				Combined Urban Estimates
			Major Sources	Area Sources	Mobile Sources	Total	Major Sources	Area Sources	Mobile Sources	Total	
	Tons/yr	% of Total	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr	Tons/yr
Chemical Manufacturing: Trichloroethylene	1.00E+02	44.93	3.27E+01	0.00E+00	0.00E+00	3.27E+01	6.74E+01	0.00E+00	0.00E+00	6.74E+01	1.00E+02
Polymers & Resins (I, II, and IV)	3.97E+01	17.82	1.77E+01	6.35E-01	0.00E+00	1.84E+01	1.95E+01	0.00E+00	0.00E+00	1.95E+01	3.78E+01
Publicly Owned Treatment Works (POTW) Emissions	2.66E+01	11.94	7.33E-01	1.77E+01	0.00E+00	1.85E+01	1.50E-01	3.62E+00	0.00E+00	3.77E+00	2.22E+01
Municipal Landfills	2.25E+01	10.08	1.54E+00	1.40E+01	0.00E+00	1.56E+01	3.15E-01	2.87E+00	0.00E+00	3.18E+00	1.88E+01
MON	1.40E+01	6.28	1.01E+01	1.02E-01	0.00E+00	1.02E+01	1.65E+00	1.66E-02	0.00E+00	1.66E+00	1.19E+01
Tire Production	8.18E+00	3.67	2.78E+00	2.80E-02	0.00E+00	2.80E+00	3.28E+00	3.32E-02	0.00E+00	3.32E+00	6.12E+00
Chemical Manufacturing: Tetrachloroethylene	7.60E+00	3.41	1.30E+00	0.00E+00	0.00E+00	1.30E+00	5.91E+00	0.00E+00	0.00E+00	5.91E+00	7.21E+00
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)	1.11E+00	0.50	1.11E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00
Industrial Organic Chemicals Manufacturing	1.05E+00	0.47	5.87E-01	4.66E-01	0.00E+00	1.05E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E+00
Unsupported Plastics Film & Sheet	8.56E-01	0.38	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chemical Preparations	5.03E-01	0.23	0.00E+00	5.03E-01	0.00E+00	5.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.03E-01
Photographic Equipment And Supplies	3.91E-01	0.18	5.55E-02	0.00E+00	0.00E+00	5.55E-02	3.35E-01	0.00E+00	0.00E+00	3.35E-01	3.91E-01
Pharmaceuticals Production	2.50E-01	0.11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	2.50E-01	2.50E-01
Polyvinyl Chloride and Copolymers Production	2.05E-02	0.01	1.40E-02	8.14E-04	0.00E+00	1.48E-02	3.70E-03	2.15E-04	0.00E+00	3.91E-03	1.87E-02

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8.0 INTRODUCTION TO THE APPENDICES

Appendices A through D provide information on how the emission estimates were determined for each source category. Table 8-1 provides an alphabetic listing by source category and shows which appendix each source category appears in. Appendix E presents the allocation percentages for major and area or mobile sources. Appendix E also shows the code for the urban/rural method used to allocate emissions for each source category.

Table 8-1
Index to Appendices A-D

112(k) Source Category	Appendix A	Appendix B	Appendix C	Appendix D
Accident And Health Insurance			X	
Acrylic Fibers/Modacrylic Fibers Production	X			X
Adhesives and Sealants			X	
Aerospace Industries	X		X	
Agricultural Chemicals and Pesticides			X	
Air and Gas Compressors			X	
Air Transportation, Scheduled			X	
Aluminum Die-Castings			X	
Aluminum Extruded Products			X	
Aluminum Foundries			X	
Aluminum Foundries (Castings)			X	
Aluminum Rolling and Drawing, nec			X	
Aluminum Sheet, Plate, and Foil manufacturing			X	
Ammunition, Except for Small Arms			X	
Analytical Instruments			X	
Animal Cremation	X			
Apparel and Accessories, nec			X	
Architectural Metal Work			X	
Asbestos Products Manufacturing			X	
Asphalt Concrete Manufacturing	X		X	
Asphalt Roofing Manufacturing	X		X	
Autobody Refinishing Paint Shop	X			
Automatic Vending Machines			X	
Automotive Services, Nec			X	
Automotive stampings			X	
Aviation Gasoline Distribution: Stage I & II	X			
Bags, Except Textile Bags			X	
Ball and Roller Bearings Manufacturing			X	
Beet Sugar			X	
Biological Products, Except Diagnostic			X	
Blankbooks and Looseleaf Binders			X	
Blast Furnaces and Steel Mills			X	
Blowers and Fans			X	
Boat Manufacturing	X		X	

Table 8-1
Index to Appendices A-D (Continued)

112(k) Source Category	Appendix A	Appendix B	Appendix C	Appendix D
Bolts, Nuts, Rivets and Washers Manufacturing			X	
Bottled and Canned Soft Drinks			X	
Brass, Bronze, Copper, Copper Base Alloy				
Foundries			X	
Brooms and Brushes			X	
Burial Caskets			X	
Business Services, nec (7399)			X	
Buttons			X	
Cadmium Refining and Cadmium Oxide Production	X			X
Cadmium Stabilizers for Plastics	X			X
Cadmium Stabilizers Production	X			X
Canned Fruits and Vegetables			X	
Carbamate Insecticides Production	X			X
Carbon and Graphite Products			X	
Carbon Black (not subject to MACT)			X	
Carbon Black Production	X			X
Carbon Reactivation Furnaces	X			
Carburetors, Pistons, Rings and Valves Manufacturing				X
Cathode Ray Television Picture Tubes Manufacturing				X
Cement, Hydraulic (not subject to Portland Cement MACT)				X
Certified Air Trans			X	
Chemical Manufacturing: ABS Resins	X			X
Chemical Manufacturing: Alkalies and Chlorine (not subject to Chlorine Production MACT)			X	
Chemical Manufacturing: Chloroform Production	X			X
Chemical Manufacturing: Chloroform Production (Storage Emissions)	X			X
Chemical Manufacturing: Chloromethanes Production	X			X
Chemical Manufacturing: Chromium	X			X

Table 8-1
Index to Appendices A-D (Continued)

112(k) Source Category	Appendix A	Appendix B	Appendix C	Appendix D
Compounds				
Chemical Manufacturing: Methyl Chloroform	X			X
Chemical Manufacturing: Naphthalene	X			X
Chemical Manufacturing: Naphthalene Sulfonates	X			X
Chemical Manufacturing: p-Dichlorobenzene (1,4-)	X			X
Chemical Manufacturing: p-Dichlorobenzene (Storage Emissions)		X		X
Chemical Manufacturing: Phenol Manufacturing	X			X
Chemical Manufacturing: Styrene	X			X
Chemical Manufacturing: Styrene (Storage Emissions)	X			X
Chemical Manufacturing: Styrene-Butadiene Copolymer Latexes	X			X
Chemical Manufacturing: Tetrachloroethylene	X			X
Chemical Manufacturing: Trichloroethylene	X			X
Chemical Preparations			X	
Chemicals and Allied Products Manufacturing			X	
Chemicals and Allied Products, nec			X	
Chlorine Production	X			
Chromic Acid Anodizing	X			
Cigarette Smoke	X			
Clay Products Manufacturing	X		X	
Clay Refractories (not subject to Refractories Manufacturing MACT)				X
Coke By-Product Plants	X			X
Coke Ovens: Charging, Top Side, and Door Leaks	X			X
Coke Ovens: Emergency Releases	X			X
Coke Ovens: Pushing, Quenching, and Battery Stacks	X			X
Cold Finishing of Steel Shapes			X	
Commercial Laundry Equipment			X	
Commercial Lighting Fixtures			X	
Commercial Physical Research			X	

Table 8-1
Index to Appendices A-D (Continued)

112(k) Source Category	Appendix A	Appendix B	Appendix C	Appendix D
Commercial Printing, Letterpress, and Screen			X	
Commercial Printing, Lithographic			X	
Commercial Sterilization Facilities		X		
Communications Equipment, nec			X	
Computer Terminals			X	
Concrete Block and Brick			X	
Concrete Products			X	
Condensed and Evaporated milk			X	
Construction Machinery Manufacturing			X	
Consumer Products Usage	X			
Conveyors and Conveying Equipment Manufacturing			X	
Copper Rolling and Drawing			X	
Creamery Butter			X	
Crowns & Closures			X	
Crushed And Broken Limestone			X	
Custom Compound Purchased Resins Manufacturing			X	
Cut Stone and Stone Products			X	
Cutlery			X	
Cyclic Crude and Intermediate Production (not subject to Petroleum Refining MACT)			X	
Decorative Chromium Electroplating	X			
Dental Equipment and Supplies			X	
Dental Preparation and Use	X			
Distilled and Blended Liquors Production			X	
Dog and Cat Food			X	
Drapery Hardware and Blinds and Shades			X	
Drum and Barrel Reclamation	X			X
Dry Cleaning Facilities	X			
Edible Fats and Oils, nec			X	
Electric Lamps			X	
Electrical Apparatus and Equipment			X	
Electrical Equipment and Supplies, nec			X	
Electrical Housewares and Fans			X	

Table 8-1
Index to Appendices A-D (Continued)

112(k) Source Category	Appendix A	Appendix B	Appendix C	Appendix D
Electrical Industrial Apparatus, nec			X	
Electromedical Equipment Manufacturing			X	
Electrometallurgical Products Manufacturing	X		X	
Electron Tubes Manufacturing			X	
Electronic Capacitors Manufacturing			X	
Electronic Coils and Transformers			X	
Electronic Components and Accessories			X	
Electronic Components, nec			X	
Electronic Connectors			X	
Electronic Resistors			X	
Elevators and Moving Stairways Manufacturing			X	
Engine Electric Equipment			X	
Engineering, Laboratory, Scientific and Research			X	
Environmental Controls Manufacturing			X	
Fabric Dress and Work Gloves			X	
Fabricated Metal Products Manufacturing			X	
Fabricated Metal Products, nec			X	
Fabricated Pipe and Fittings			X	
Fabricated Plate Work (Boiler Shops)			X	
Fabricated Rubber Products Manufacturing			X	
Fabricated Rubber Products, nec			X	
Fabricated Structural Metal Manufacturing			X	
Fabricated Structural Metal Products			X	
Fabricated Textile Products, nec			X	
Farm Machinery and Equipment Manufacturing			X	
Fasteners, Buttons, Needles, and Pins			X	
Fertilizers, Mixing only			X	
Fiber Cans, Drums, and Similar Products			X	
Flat Glass			X	
Flavoring Extracts and Syrups Production			X	
Copper Foundries			X	
Flexible Polyurethane Foam Fabrication Operations	X			
Flexible Polyurethane Foam Production	X			X

Table 8-1
Index to Appendices A-D (Continued)

112(k) Source Category	Appendix A	Appendix B	Appendix C	Appendix D
Fluid Meters and Counting Devices			X	
Fluid Power Cylinders and Activators			X	
Fluid Power Pumps and Motors			X	
Fluid Power Valves and Hose Fittings				
Manufacturing			X	
Fluorescent Lamp Recycling	X			
Fluorocarbon Production	X			X
Food and Agricultural Products: Cotton Ginning	X			
Food Preparations Production			X	
Food Products Machinery			X	
Food Products Machinery Manufacturing			X	
Footwear Cut Stock			X	
Footwear, Except Rubber, nec			X	
Formaldehyde, Acrolein, Acetaldehyde, Butyraldehyde Production	X			X
Friction Products Manufacturing	X			X
Gaskets, Packing and Sealing Devices			X	
Gaskets, Packing and Sealing Devices Manufacturing			X	
Gasoline Distribution Stage I	X			
Gasoline Distribution Stage II	X			
General Building Contractors			X	
General Industrial Machinery Manufacturing			X	
General Laboratory Activities	X			
Geothermal Power	X			X
Glass Containers			X	
Guided Missiles and Space Vehicles Manufacturing			X	
Gum and Wood Chemical Manufacturing			X	
Halogenated Solvent Cleaners	X			
Hand and Edge Tools Manufacturing			X	
Hard Chromium Electroplating	X			
Hardware Manufacturing			X	
Hardwood Veneer and Plywood			X	
Hazardous Waste Incineration	X			X

Table 8-1
Index to Appendices A-D (Continued)

112(k) Source Category	Appendix A	Appendix B	Appendix C	Appendix D
Heating Equipment, Except Electric			X	
Heavy Construction, Nec			X	
Highway And Street Construction			X	
Hoists, Cranes, and Monorails			X	
Hose and Belting and Gaskets and Packing			X	
Hospital Sterilizers	X			
House Slippers			X	
Household Appliances			X	
Household Audio and Video Equipment			X	
Household Vacuum Cleaners			X	
Human Cremation	X			
Hydrochloric Acid Production		X		
Industrial Boilers	X			
Industrial Controls			X	
Industrial Furnaces and Ovens			X	
Industrial Gases Manufacturing			X	
Industrial Inorganic Chemical Manufacturing			X	
Industrial Machinery, nec			X	
Industrial Organic Chemicals			X	
Industrial Organic Chemicals Manufacturing			X	
Industrial Patterns			X	
Industrial Patterns Packaging machinery			X	
Industrial Process Cooling Towers	X			
Inorganic Pigments Manufacturing	X		X	X
Inorganic Pigments: Cadmium Pigments in Plastics	X			X
Institutional/Commercial Heating	X			
Instrument Manufacturing	X			
Instruments to Measure Electricity			X	
Integrated Iron and Steel Manufacturing		X		
Internal Combustion Engine Manufacturing			X	
Iron and Steel Forging			X	
Iron and Steel Foundries (not subject to Iron Foundries MACT)			X	
Iron Foundries			X	

Table 8-1
Index to Appendices A-D (Continued)

112(k) Source Category	Appendix A	Appendix B	Appendix C	Appendix D
Jewelry, Precious Metal			X	
Lamp Breakage	X			
Large Appliance (Surface Coating)			X	
Lawn and Garden Equipment			X	
Lead Oxide in Pigments	X			
Lead Pencils, Art Goods Manufacturing			X	
Leather Goods, nec			X	
Leather Tanning and Finishing Operations		X		
Lighting Equipment			X	
Lime Manufacturing	X		X	
Lubricating Oils and Greases			X	
Luggage			X	
Machine Tool Accessories			X	
Machine tools, Metal Cutting Types			X	
Machine tools, Metal Forming Types			X	
Magnetic and Optical Recording Media Manufacturing				X
Malt Beverages			X	
Manifold Business Forms			X	
Manufacturing Industries, nec			X	
Marine Vessel Loading Operations	X			
Marking Devices			X	
Measuring and Controlling Devices, nec			X	
Measuring and Dispensing Pumps			X	
Meat Packing Plants			X	
Mechanical Rubber Goods Manufacturing			X	
Medical Waste Incinerators	X			X
Men's and Boys' Shirts			X	
Men's And Boys' Suits And Coats			X	
Men's And Boys' Trousers And Slacks			X	
Men's and Boys' Work Clothing			X	
Men's Footwear, Except Athletic			X	
Metal Barrels, Drums, and Pails Manufacturing			X	
Metal Can (Surface Coating)			X	

Table 8-1
Index to Appendices A-D (Continued)

112(k) Source Category	Appendix A	Appendix B	Appendix C	Appendix D
Metal Cans and Shipping Containers			X	
Metal coating and allied services (3479)			X	
Metal Coil (Surface Coating)		X		
Metal Doors, Sash, and Trim			X	
Metal forgings and Stampings			X	
Metal Furniture (Surface Coating)			X	
Metal Heat Treating Manufacturing			X	
Metal Sanitary Ware Manufacturing			X	
Metal Services, nec			X	
Metal Stampings Manufacturing			X	
Metal Valves			X	
Metals Service Centers and Offices			X	
Metalworking Machinery			X	
Metalworking Machinery, nec			X	
Millwork, Plywood, and Structural Members			X	
Mineral Wool Manufacturing (not subject to Mineral Wool Production MACT)				X
Mineral Wool Production	X			X
Mining Machinery Manufacturing			X	
Misc. Nonmetallic Mineral Products			X	
Miscellaneous Chemical Products (2890)			X	
Miscellaneous Fabricated Metal Products			X	
Miscellaneous Fabricated Wire Products			X	
Miscellaneous Manufactures (3990)			X	
Miscellaneous Metal Work			X	
Miscellaneous Plastics Products			X	
Miscellaneous Plastics Products, nec			X	
Miscellaneous Publishing			X	
Miscellaneous Transportation Equipment				X
Mobile Sources: Nonroad Vehicles and Equipment - Aircraft	X			
Mobile Sources: Nonroad Vehicles and Equipment - Commercial Marine Vessels	X			
Mobile Sources: Nonroad Vehicles and Equipment - Locomotives	X			

Table 8-1
Index to Appendices A-D (Continued)

112(k) Source Category	Appendix A	Appendix B	Appendix C	Appendix D
Mobile Sources: Nonroad Vehicles and Equipment - Other	X			
Mobile Sources: Onroad Vehicles	X			
MON	X		X	
Motor and Generators Manufacturing			X	
Motor Vehicle Equipment			X	
Municipal Landfills	X			
Municipal Waste Combustors	X			X
Naphthalene: Miscellaneous Uses	X			
National Security			X	
Natural Gas Transmissions and Storage	X			
Needles, Pins, Hooks and Eyes and Similar Notions			X	
Nitrogenous Fertilizers			X	
Non-Vehicular IC Engines			X	
Nonclay Refractories (not subject to Refractories Manufacturing MACT)				X
Noncurrent-Carrying Wiring Devices			X	
Nonferrous Die-castings, Except Aluminum			X	
Nonferrous forgings			X	
Nonferrous Foundries, nec			X	
Nonferrous Rolling and Drawing			X	
Nonferrous Wire Drawing and Insulating			X	
Nonmetallic Mineral Products Manufacturing			X	
Nutritional Yeast Manufacturing	X			X
Oil and Gas Field Machinery Manufacturing			X	
Oil and Natural Gas Production	X			
Open Burning: Scrap Tires	X			
Open Burning: Forest and Wildfires	X			
Open Burning: Prescribed Burnings	X			
Ophthalmic Goods			X	
Optical Instruments and Lenses			X	
Optical instruments and lenses (disc. 1987, 3827)			X	
Ordnance and Accessories Manufacturing			X	
Ordnance And Accessories, nec			X	

Table 8-1
Index to Appendices A-D (Continued)

112(k) Source Category	Appendix A	Appendix B	Appendix C	Appendix D
Other Cadmium Compound Production	X			X
Paints and Allied Products Manufacturing			X	
Paper And Allied Products			X	
Paper and Other Webs (Surface Coating)			X	
Paper Coating and Glazing Manufacturing			X	
Paper Industries Machinery			X	
Paper Mills (not subject to Pulp and Paper MACT)				X
Paperboard Mills			X	
Particleboard			X	
Partitions And Fixtures			X	
Pens and Mechanical Pencils			X	
Petroleum Bulk Stations and Terminals (not subject to Petroleum Refining MACT)				X
Petroleum Products, nec				X
Petroleum Refineries: Catalytic Cracking (Fluid and Other) Units, Catalytic Reforming Units, and Sulfur Plant Units	X			
Petroleum Refineries: Other Sources Not Distinctly Listed	X			X
Petroleum Refining (not subject to Petroleum Refining MACT)				X
Pharmaceuticals Production	X		X	
Phosphate Fertilizers Production			X	
Photographic Equipment And Supplies			X	
Phthalic Anhydride Production	X			X
Plastic Parts and Products (Surface Coating)	X	X	X	
Plastics Foam Products Manufacturing (not subject to Plastic Parts (Surface Coating) MACT)				X
Plastics Pipe				X
Plastics Products Inc. Plastic Bottles				X
Platemaking Services				X
Plating And Polishing				X
Plumbing And Heating, Except Electric			X	
Plumbing Fixture Fittings and Trim			X	

Table 8-1
Index to Appendices A-D (Continued)

112(k) Source Category	Appendix A	Appendix B	Appendix C	Appendix D
Plumbing, Heating, Air-conditioning			X	
Plywood/Particle Board Manufacturing		X		
Polishes and Sanitation Goods Manufacturing			X	
Polycarbonates Production	X			X
Polyether Polyols Production	X			
Polymers & Resins (I, II, and IV)			X	
Polymers & Resins III	X			X
Polystyrene Production	X			X
Polyvinyl Chloride and Copolymers Production	X			
Portland Cement, Excluding Hazardous Waste-fired	X			
Potato Chips and Similar Snacks			X	
Poultry Slaughtering and Processing			X	
Power Driven Handtools			X	
Power Transmission Equipment			X	
Prefabricated Metal Buildings			X	
Prepared Feeds Manufacturing			X	
Pressed and Blown Glass and Glassware Manufacturing				X
Primary Aluminum Production	X		X	
Primary Battery, Dry and Wet Manufacture	X		X	
Primary Copper (not subject to Primary Copper Smelting MACT)				X
Primary Copper Smelting	X			X
Primary Lead Smelting	X	X		X
Primary Metal Products Manufacturing			X	
Primary Nonferrous Metals Production			X	
Primary Smelting and Refining of Zinc			X	
Printing Ink			X	
Printing Trades Machinery Manufacturing			X	
Printing, Coating, and Dyeing of Fabrics			X	
Printing/Publishing (Surface Coating)			X	
Process Control Instruments			X	
Products of Purchased Glass			X	
Publicly Owned Treatment Works (POTW)	X			

Table 8-1
Index to Appendices A-D (Continued)

112(k) Source Category	Appendix A	Appendix B	Appendix C	Appendix D
Emissions				
Pulp and Paper Production (combustion) MACT II	X			X
Pulp and Paper Production (non-combustion) MACT I	X			X
Pulp mills (not subject to Pulp and Paper MACT)			X	
Pumps and Pumping Equipment Manufacturing			X	
Radio and Television Communications Equipment (3662)			X	
Radio and Television Communications Equipment (3663)			X	
Railroad Equipment Manufacturing			X	
Reconstituted Wood Products			X	
Refractories Manufacturing	X			X
Refuse Systems			X	
Reinforced Plastic Composites Production	X	X		
Relays and Industrial Controls			X	
Rental of Railroad Cars			X	
Residential Heating: Wood/Wood Residue Combustion	X			
Residential Heating: Anthracite Coal Combustion	X			
Residential Heating: Bituminous and Lignite Coal Combustion	X			
Residential Heating: Distillate Oil Combustion	X			
Residential Heating: Natural Gas Combustion	X			
Residential lighting fixtures			X	
Robes and Dressing Gowns			X	
Rolling Mill Machinery			X	
Roofing, Siding, And Sheet Metal Work			X	
Rubber & Misc. Plastic Products			X	
Rubber and Plastic Footwear			X	
Rubber and Plastic Footwear Manufacturing			X	
Rubber and Plastic Hose and Belting			X	
Rubber and Plastic Hose and Belting Manufacturing			X	

Table 8-1
Index to Appendices A-D (Continued)

112(k) Source Category	Appendix A	Appendix B	Appendix C	Appendix D
Sanitary Food Containers			X	
Saw Blades and Handsaws			X	
Sawmills and Planing Mills, general			X	
Scrap Tire Combustion	X			X
Screw Machine Products Manufacturing			X	
Search and Navigation Equipment			X	
Secondary Aluminum Smelting	X			
Secondary Copper Smelting	X			
Secondary Lead Smelting	X			X
Secondary Mercury Production	X			X
Secondary Nonferrous Metals			X	
Secondary Nonferrous Metals Production			X	
Secondary Zinc Production	X			X
Semiconductor Manufacturing			X	
Sewage Sludge Incineration	X			X
Sheet Metal Work			X	
Ship and Boat Building (not subject to Boats Manufacturing MACT)				X
Shipbuilding and Ship Repair (Surface Coating)	X	X		
Silverware and Plated Ware			X	
Small Arms			X	
Small Arms Ammunition			X	
Soap and Other Detergents Manufacturing			X	
Soaps, Cleaners, and Toilet Goods			X	
Softwood Drying Kilns	X			
Softwood Veneer and Plywood			X	
Space Propulsion Units and Parts Manufacturing			X	
Space Research and Technology			X	
Space Vehicle Parts and Equipment, nec			X	
Spandex Production	X			X
Special Dies, Tools, Jigs and Fixtures			X	
Special Industry Machinery Manufacturing			X	
Special Industry Machinery, nec			X	
Special Trade Contractors, nec			X	

Table 8-1
Index to Appendices A-D (Continued)

112(k) Source Category	Appendix A	Appendix B	Appendix C	Appendix D
Speed Changers, Drives, and Gears			X	
Stainless and Non-stainless Steel Manufacture - EAF		X		
Stationary Combustion Turbines	X			
Stationary Internal Combustion Engines	X			
Steel and Iron Reclamation- Auto Scrap Burning			X	
Steel Foundries			X	
Steel Pipe and Tubes Manufacturing			X	
Steel Springs, Except Wire			X	
Steel Wire and Related Products Manufacturing			X	
Storage Batteries Manufacturing			X	
Structure Fires	X			
Surface Active Agents Manufacturing			X	
Surgical and Medical Instruments Manufacturing			X	
Surgical Appliances and Supplies Manufacturing			X	
Switchgear and Switchboard Apparatus			X	
Taconite Iron Ore Processing	X			X
Tanks and Tank Components Manufacturing			X	
Telephone and Telegraph Apparatus			X	
Textile Machinery			X	
Tire Cord And Fabrics			X	
Tire Production	X			X
Tires and Inner Tubes (not subject to Tire Production MACT)			X	
Toilet Preparations Manufacturing			X	
Toys and Sporting Goods			X	
Transformers, Except Electronic			X	
Transmitting, Industrial and Special Purpose Elect				X
Transportation Equipment			X	
Travel Trailers and Campers Manufacturing			X	
Trucking, Except Local			X	
Turbines and Turbine Generator Sets			X	
Typewriters Computer Storage Devices			X	
Unsupported Plastics Film & Sheet			X	

Table 8-1
Index to Appendices A-D (Continued)

112(k) Source Category	Appendix A	Appendix B	Appendix C	Appendix D
Unsupported Plastics Profile Shapes			X	
Upholstered Household Furniture			X	
Uranium Hexafluoride Production		X		
Utility Boilers - Coal	X			X
Utility Boilers - Coke	X			X
Utility Boilers - Natural Gas	X			X
Utility Boilers - Oil	X			X
Valves and Pipe Fittings Manufacturing			X	
Vegetable Oil Mills, nec			X	
Vegetable Oil Production		X		
Watches, Clocks, Watchcases, and Parts			X	
Water, Sewer, and Utility Lines			X	
Welding Apparatus			X	
Welding Apparatus, Electric			X	
Wet Corn Milling			X	
Wire Springs			X	
Women's Footwear, Except Athletic			X	
Wood Building Products (Surface Coating)			X	
Wood Furniture (Surface Coating)			X	
Wood Partitions and Fixtures			X	
Wood Preserving	X		X	
Wood Products			X	
Wool Fiberglass Manufacturing	X			X
X-ray Apparatus and Tubes			X	